Canadian Environmental Assessment Agency
Agence canadienne d'évaluation environnementale

Environmental Assessment Update – Recent Developments with National and International EIA Processes

Proceedings of a Policy Forum

New Orleans, USA
27th May 1997

Held in Conjunction with:

The International Association for Impact Assessment Annual Conference of 1997

The Canadian Environmental Assessment Agency

The Institute of Environmental Assessment, UK

The President's Council on Environmental Quality, USA

Canada

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PREFACE

I am pleased to transmit to you the final Proceedings of the Policy Forum held in New Orleans, USA, May 27, 1997.

This Policy Forum was organized as a follow-up to the International Study of the Effectiveness of Environmental Assessment. The Study was led by the Canadian Environmental Assessment Agency in cooperation with the International Association for Impact Assessment (IAIA). Its final results were presented at IAIA '96 in Portugal. The success of the Study was the result of the participation of many partners and institutions from organizations around the world.

These partners recognized the need for environmental assessment administrators to meet and exchange information on evolving practices and experiences. Consequently, the Agency, in collaboration with the UK Institute of Environmental Assessment and the USA Council on Environmental Quality, held this Policy Forum.

I would like to take this opportunity to thank all participants for their important contribution and hope that these valuable exchanges may continue in future years.

Sid Gershberg
President
Canadian Environmental Assessment Agency

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REPORT OF THE INTERNATIONAL POLICY FORUM

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PART I

1. Introduction

At the New Orleans forum, the terms environmental assessment (EA) and environmental impact assessment (EIA) were used interchangeably. In this report the term "EIA" is used as the common currency, except where referring to the term used formally by a country or agency to describe its process.

The policy forum was convened as a follow up one year after the conclusion of the International Study of the Effectiveness of Environmental Assessment. Held in conjunction with the Annual Conference of the International Association for Impact Assessment, the forum was attended by representatives of countries and international organisations which sponsored and participated in the effectiveness study, along with other interested parties. The forum was organised by the Canadian Environmental Assessment Agency in co-operation with the US Council on Environmental Quality. The Institute of Environmental Assessment UK acted as the secretariat to the forum to provide continuity with the effectiveness study.

The aims of the forum were :

- to review the current status of EIA in participating countries/organisations;
- to highlight trends, issues and directions of EIA; and
- to identify opportunities for further international collaboration.

The forum responded to a recognised need for senior officers from local and international agencies responsible for EIA to meet and exchange views and information on recent developments in EIA process and practice. The importance of such a forum was identified at both the International Summit on Environmental Assessment, held in Quebec City, June 1994 and the final workshop of the steering committee of the International Study of the Effectiveness of Environmental Assessment held in Amsterdam March 1996. At the Amsterdam workshop it was recognised that the realities under which the EIA process operates are constantly changing and that improving its effectiveness constitutes an unfinished agenda. The annual meeting of IAIA was seen as a cost effective opportunity to maintain the professional contacts and exchange of practical experiences that had underpinned the effectiveness study.

At New Orleans, a specific item for discussion was the feasibility of a standing forum, possibly linked to the preparation of an annual report on the status of EA. Such a report was seen as being of potential interest to members and others interested in the field. To pilot test this idea, the countries attending were asked to prepare a status report to a common format designed to highlight key developments and issues and facilitate their comparison. In addition, selected aspects of EIA practice were reviewed in greater depth and several proposals were tabled for future collaboration and networking. The Netherlands EIA Commission also distributed copies of the Country Status Report on EIA, prepared as part of the effectiveness study.

2. Recent Developments in EA.

Status reports were presented by several countries and organisations participating in the policy forum. Recent trends and developments were highlighted, with particular reference to measures that follow up on the inputs to and recommendations of the effectiveness study. The full texts of the status reports are contained in section 2. A summary of the main themes which emerged is given below.

In the 1990s, major developments have occurred in EIA law and procedure. These include enactment of EIA statutes by developing countries (e.g. Benin), reforms to well established EIA systems in industrial countries (e.g. Canada) and the introduction of SEA provisions (e.g. Hong Kong). Now, attention is being given to implementation of amended EIA law and procedures (e.g. Canada). Other countries are undertaking reviews of EIA systems (e.g. Japan). Some of the key developments reported at the policy forum are noted below.

- **Australia**. The consideration of proposed improvement to the Commonwealth (national) EIA process has been deferred pending the review of federal/state roles and responsibilities. In the interim, all jurisdictions have implemented the *guidelines and criteria for determining the need for and level of EIA*. A National Agreement has been drafted to provide a firm inter-jurisdictional basis for process harmonisation and accreditation.

- **Benin**. Since 1995, the enactment of international EIA framework legislation has overlain the procedures and requirements of lending aid agencies, e.g. the Africa Development Bank. There are continuing problems relating to the implementation of the law, the lack of capacity and expertise at all levels and constraints on data gathering, analysis and preparation of EISs. Partnership and training programmes are being instituted as trial "solutions."

- **Canada**. The focus is on interpreting and operationalising the *Canadian Environmental Assessment Act* (which deals with projects) and the *Cabinet Directive on Policy and Programme Assessment*. Various regulatory, procedural training and research and development initiatives are being taken to support the implementation of the Act and Directive.

- **France**. The 20th anniversary of the French EIA system (October 1997) will be marked by special activities to take stock of past experience and to look at future requirements.

- Steps are also being taken to implement recent national legislation (Law on Air, 1996) and the European Community EIA Directive (97/11/EC) and to prepare for the forthcoming European Community Directive on SEA of plans and programmes (expected in early 1998).

- **Hong Kong**. Major initiatives include:

  - enactment of the EIA Ordinance (to come into effect in 1998);
  - specification of guidelines and criteria for process implementation in a technical memorandum pursuant to the Ordinance;
  - publication of a generic environmental monitoring and audit manual and preparation of a SEA of the Territorial Development Strategy.

- **Japan**. Following public review of Japanese (and international) experience, a bill on the Environment Impact Assessment System is before the National Diet [passed later in 1997] New screening, scoping, EIA review and follow-up procedures are to be introduced, and the transparency and the scope of public participation are to be improved

- **The Netherlands**. For the second time, the Dutch EIA system has been reviewed by the Evaluation Commission. The Commission's report is positive but also makes several major recommendations for process strengthening. Currently, these are being reviewed under three main categories of action relating to obligatory EIA and screening, the application of EIA to land use planning and the relationship of EIA and environmental licensing.

- **United States of America (USA)**. In 1997, the Council on Environmental Quality completed two important reviews, focusing on consideration of cumulative effects under the *National Environmental Policy Act* and the effectiveness of the process after 25 years of experience. The council also issued draft guidance to all agencies on implementing an Executive Order on *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*.

- **United Kingdom (UK)**. Options for the implementation of European Directive (97/11/EC) are being reviewed. The Directive increases the number of projects which may require EIA and changes the way Member States may determine Annex II projects. The UK Government's preferred approach is to build on the existing system by introducing a combination of exclusive (categorical) and indicative (case by case) thresholds to provide a clear, consistent and appropriate guidance on the projects to be covered.

- **United Nations Industrial Development Organisation (UNIDO)**. The use of EIA in developing countries to review industrial projects is constrained by many issues. These include limited availability of data and methodologies, narrow scope of analysis (e.g. omitting examination of site and of technological alternatives), absence of follow up, and insufficient linkages to other processes and instruments for environmental management, such as life cycle analysis, health and safety systems and ISO standards.

3. Issues of Practice

The practice of EA in industrial and developing countries is subject to a number of widely acknowledged pressures and constraints. A range of issues and challenges were aired at the policy forum. Further information on the particular concerns of participating countries and international organisations can be found in the accompanying status reports. The intent here is to summarise the main issues of EIA practice that were reviewed and raised at the forum.

Specifically, three areas for forum discussion were pre-identified;

1. understanding and communicating the value added by EIA (led by Jules Scholten, Secretary-General, Netherlands EIA Commission);
2. applying EIA in an era of resource constraints, (led by Sid Gershberg, President, Canadian Environmental Assessment Agency); and
3. experience with EIA in international development (led by Jean-Roger Mercier, Senior Environmental Specialist for Africa, The World Bank).

3.1 The Value of Benefits of EIA

Evaluation of the positive contribution of the EIA process to decision making and environmental protection was a major theme of the effectiveness study. In the Netherlands, a review of the EIA system by the Evaluation Commission confirmed the net direct and indirect benefits of process application and indicated these outweighed the time and resource costs of compliance. However, this evidence is overlooked by politicians and others according to the Netherlands EIA Commission. The result is that the Dutch EIA system is characterised by "successful application and mediocre reputation".
This paradox and its applicability elsewhere were the subject of a lively debate. A general agreement was reached on the need to better communicate the value added by EIA, not only to decision makers but also to other 'client groups'. However forum participants recalled that the 1994 International Summit on Environmental Assessment also emphasised the importance of better communication with users of the EIA process. Progress on this front appears to be relatively slow, not least because of the day to day pressures and exigencies of EIA application.

A range of other issues were touched on in this theme. Notably, these included the conflicts and contradictions that occur between the 'political' and 'rational' frameworks under which, respectively, decision making and EIA are conducted. The broad range of considerations and trade-offs that enter into and must be balanced in political decision making catalysed a further discussion of the pros and cons of taking a more integrated approach to EIA, consistent with the social economic and ecological pillars of the sustainability agenda. Not unexpectedly, there was no consensus on the issue.

Some participants preferred to stay within the mainstream approach i.e. considering only social and economic factors that are directly related to environmental issues. Others were inclined to try and broaden the scope of EIA progressively toward sustainability analysis. However, it was also recognised that the approach carried 'downside' risks. These included the possibility that the approach would be seen as threatening by decision makers and

development agencies, thereby reducing rather than improving the perceived value and benefits of the EIA process.

3.2 Cost-effectiveness of EIA

National and international organisations responsible for EIA systems are concerned about the efficiency of process application and being seen to deliver value for money. Many countries are experiencing resource and financial constraints as a result of government downsizing and deficit reduction. This is the case in Canada, where the environment sector has had a 35% reduction in funding. Other countries and international organisations report similar though less severe pressures.

Since EIA requirements and expectations are undiminished or increasing, the challenge is to do more with less. Improved cost effectiveness is being pursued in a number of ways. These include demonstrating that EIA leads to more informed decision making (as discussed previously) at the lowest possible outlay. Process efficiency measures being examined or implemented include:

- streamlining information requirements and administrative procedures (e.g. USA);
- issuing best practice guidance to ensure EIAs are focused properly (e.g. UK);
- reducing duplication and overlap with the approval systems (e.g. Australia, Netherlands); and
- instituting cost recovery (e.g. for public reviews and comprehensive studies in Canada).

The last issue was the subject of some debate, although few countries have experience with cost recovery or have seriously considered its introduction. In the Netherlands, the EIA Commission chose to continue a free service of advising project proponents and competent authorities. The Commission considered that introducing cost recovery might have compromised its independence. Other countries which have considered cost recovery noted the political difficulties of introducing the measure and/or judged that the returns may not warrant the risk (e.g. Hong Kong).

3.3 EIA in support of International Development Assistance

In 1996, The World Bank published its second year review of its experience with environmental assessment. The review covers the period from 1992-1995. It indicates that considerable improvements have been made in procedure and practice but that shortcomings remain in a number of areas. An action plan has been drawn up to strengthen the effectiveness of EIA. The steps and measures to be taken include revisions to screening procedure, a more rigorous analysis of alternatives and greater emphasis on environmental supervision, impact management, evaluation and feedback.

The Africa region was the focus of particular discussion about the effectiveness of the EA process in support of international development, building on earlier discussion at the 1995 High Level Ministerial Meeting on EIA in Africa, held in Durban. To date, the World Bank's EA process has resulted in major design changes to relatively few projects. More commonly, the EA process contributes by adding environmental management plans and mitigation

measures to projects which are often designed independently. The effectiveness review also found that certain category B projects, i.e. that require more limited environmental analysis, have been improved by design changes and mitigation measures. For both full and limited EAs, clearer specification of responsibilities and up front identification of financial resources is seen as the key to more effective implementation of environmental management plans.

The World Bank's policy is also to promote the use of regional and sectoral EAs, moving the analysis of environmental issues upstream in the decision making process. Experience indicates that their use can eliminate environmentally negative proposals and alternatives and facilitates focusing project EAs on site-specific issues. Sectoral EAs are more common than regional EAs, in which there is still limited experience. Few sectoral EAs have been undertaken in Africa (as compared to Asia and Latin America).

Finally, the World Bank's *Action Plan for Strengthening the EA Process* includes a component to build capability in borrowing countries. The World Bank - IUCN initiative for Capacity Building in Environmental Assessment in sub-Saharan Africa is described elsewhere in this report. In addition, EIA Training Strategies are being established for Africa, other operational regions and particular countries. A recognised need is for better co-ordination of the training projects undertaken by international organisations and bilateral aid agencies. The testing of UNEP EIA Training Resource Manual (described elsewhere) provides a potential vehicle for this purpose.

4. The Wider Agenda

An open discussion session brought forward a wider range of issues of EIA practice. These were based on questions of interest raised by countries in their status reports to gain other experiences and views. Some of the main themes of discussion included :

Effectiveness of Public Participation. Particular reference was made to measures for making the EIA process more relevant and convenient to those interested in and affected by proposals under review. Specific experiences were described in consulting with indigenous peoples, other minorities and 'direct-action' protesters.

Practicality of Strategic Environmental Assessment. The main interest was in how to make policy and planning level assessment more practical, focused and relevant to decision making. Other themes related to the use and adaptation of EIA methods and procedures to cope with greater uncertainty encountered at the strategic level and the linkage of SEA to other tools and processes including ecosystem level approaches that establish "capacity-based" perspectives on sustainable development.

Necessity of follow-up and monitoring . The importance of strengthening post-approval procedures and activities is widely recognised. As a minimum, countries and international organisations are moving to ensure better compliance with follow-up and monitoring requirements, and ideally, look to these making EIA an adaptive practice process in which learning from experience is a continuing activity. However, it is acknowledged that there is some distance to go before that ideal is achieved.

5. Proposals for International Collaboration

Six proposals were tabled regarding further international collaboration:

- establishment of an international EIA network;
- testing the UNEP EIA Resource Training Manual;
- establishment of a World EIA council;
- establishment of an EIA secretariat;
- review of the status of SEA;
- preparation of generic EIA principles

International EIA Network

This proposal is aimed at the development of a internet-based EIA network for information exchange as a continuation of the effectiveness study. It is intended that the network would be based on and extend the electronic network and database presently maintained by Environment Australia. The aims of the network would be to:

- provide practitioners world-wide with easy access to timely information on national and international EIA;
- to open the channels of communication within and between countries;
- raise the quality and awareness of EIA practices and procedures; and
- support capacity building in the various regions.

UNEP EIA Training Resource Manual

The manual was prepared by a project team led by Environment Australia with support from an EIA expert group drawn from developed and developing countries. In preparing the Manual, extensive use was made of the reports and findings of the effectiveness study. A companion volume on EIA Issues, Trends and Practice, is also available and a volume of case studies is being prepared to supplement the Manual. Pilot testing or trialling of the Manual will be undertaken prior to it's wider dissemination and other countries were invited by UNEP to participate in this process, e.g. by using the Manual to support their own or related training activities. The Manual itself, full contact details and updates on trials can be found in the EIA network discussed above.

EIA Secretariat

The Australian network also has the potential to facilitate wider exchanges on EIA practice and training and to support professional development activities. However, a more co-ordinated approach and "hands on" use of the network and database requires the establishment of a small secretariat, possibly centred at UNEP. A proposal in principle was outlined by the representative of the Netherlands Ministry of Foreign Affairs.

World EIA Council

The feasibility of establishing a World EIA Council was reported to be under discussion by the IAIA Board. No specific details were given.

Preparation of EIA Principles

The preparation of generic principles of EIA best practice is an initiative of IAIA. A first draft of the principles prepared by the Institute of Environmental Assessment and drawing on work by the effectiveness study, the UNEP expert group (see above) and others, was scheduled for discussion at IAIA Annual Conference. Participants at the policy forum were invited to participate in their expert capacity as IAIA members to ensure that the principles were firmly ground in practical experience gained by national and international agencies.

Review of SEA Processes

The Netherlands EIA Commission asked about the interest of other countries in a review of the status and development of SEA. The review will draw on the framework and methodologies used to review the status of EIA processes for the effectiveness study. The Japan Environment Agency is proposing to take this project forward. A draft report on the results of the project will be tabled at IAIA '98 and, specifically, at the next policy forum (if held).

6. Conclusions

The participants concluded that the forum was a successful initiative which resulted in a valuable exchange of ideas and experiences. It was agreed that a second policy forum will be convened at the 1998 IAIA Annual Conference, provided that appropriate arrangements can be made with the host country. Martin Ward, who attended the policy forum as an observer for the New Zealand Ministry of Environment and in his capacity as the organiser of IAIA '98, will take this matter forward on behalf of participants.

PART II

COUNTRY STATUS REPORTS

COMMONWEALTH EIA IN AUSTRALIA

JoAnne Disano
Environment Australia

BACKGROUND

Legal and Policy Basis of EIA

- Commonwealth EIA is administered under the *Environment Protection (impact of proposals) Act 1974* (EPIP Act) and associated Administrative Procedures.

- Guidelines and Criteria for determining the need for and level of environmental impact

- assessment in Australia (discussed later) are used in conjunction with the EPIP Act.

Major Benchmarks

- The Administrative Procedures were amended in 1987 to allow the preparation of Public environment Reports (PERs) in situations where a proposal may be of a localized nature or involve only one or two major issues, which while not warranting the preparation of an EIS, may nevertheless arouse considerable public interest. The PER thus provides an intermediate level of assessment below the EIS. The PER concept has also been adopted in a number of State/Territory procedures.

- In 1995, the Administrative Procedures were amended in response to the decision of the Federal Court of Australia in *Tasmanian Conservation Trust Inc. v. Minister for Resources & Anor* which decision held that Action Ministers are required by law to consider whether operations (such as woodchipping in the case mentioned) affected or were likely to affect the environment to a significant extent and that it is not sufficient to merely consider whether the effect on the environment of a proposal was sufficiently considered by an earlier assessment or was consistent with standards laid down in an earlier document.

Brief Characterization of Process

- The object of the EPIP Act is to ensure, to the greatest extent practicable, that matters affecting the environment to a significant extent are fully examined and taken into account in relation to Commonwealth actions.

- The EPIP Act applies to a broad range of Commonwealth actions including the making of decisions, the formulation of proposals, the carrying out of works and other projects and the incurring of expenditure.

- The EPIP Act provides for a number of levels of environmental assessment:
  - assessment without the preparation of an PER or EIS;
  - assessment following the preparation and public review of a PER or EIS; or
  - assessment by a Commission of Inquiry.

After assessment, the Commonwealth Environment Minister (the Minster) may make comments, suggestions or recommendation on the environmental aspects of the proposal.

RECENT DEVELOPMENTS

EIA Review

- A public review of Commonwealth EIA was conducted from 1993 to 1995 and identified a range of possible improvements to Commonwealth EIA. Consideration of outcomes of the review has been deferred pending Council of Australian Governments (COAG) consideration of its "Review of commonwealth/State roles and responsibilities for the environment", currently scheduled for July 1997.

ANZECC Agreement and Guidelines & Criteria

- The council of Australian and New Zealand Environment Ministers (ANZECC) developed a set of *Guidelines and criteria for determining the need for and level of EIA*, which all jurisdictions have subsequently adopted either into their legislation or EIA processes.

- The ANZECC Working Group on EIA has also recently drafted a *National Agreement on EIA*. The main purpose of the Agreement, which is yet to be formally adopted, is to provide a firmer basis for cross-jurisdictional EIA process, including joint EIA and accreditation.

ACTIVITIES UNDERTAKEN

Current Major Projects

Sydney Second Airport

- Environment Australia is at present involved in the process of assessing a large EIS proposal to construct a second major airport at Badgerys Creek or Holsworthy in the State of New South Wales with other potential sites are outside the Sydney basin. There is significant opposition to construction at either site with over 53,000 submissions received on the draft guidelines. Noise and air quality are the main issues with related lifestyle, health and property value concerns.

Another important issue relating to airports relates to the proposed new operating procedures at the existing Sydney (KSA) Airport. The proposal aims to make full use of the three runways and to use different time and weather-related approach and departure patterns to create an equitable sharing of noise impacts on Sydney residents (prior procedures focused noise impacts on a narrow north-south corridor).

Telecommunications Proposals

Telecommunication proposals come to Environment Australia for environmental assessment in accordance with the provisions of the *Telecommunications National Code 1996* (the Code), the purpose of which is to set out national uniform rules for the installation and maintenance of telecommunications facilities.

- Environmental issues assessed under the Code include fauna, flora, heritage, health and safety (electromagnetic radiation), aesthetics and visual impact, land use and social values. A total of 137 proposals has been referred to Environment Australia under the Code.

- After July 1997, a new Telecommunications Act will come into force and will replace the current 1992 Act and Code.

Mining Export Controls/Uranium Mines

- The Commonwealth government is encouraging development of new mining and industrial development, removing as far as possible unnecessary Government impediments. Export controls were in place on mineral sands, coal, bauxite and some other raw materials and products but have recently been lifted (subject to not disallowance motion being passed in the Senate on or before May 29, 1997).

- Export controls on uranium and related nuclear material remained in force, but the previous Government's Three Mine Policy which restricted the total number of uranium mines operating in Australia to three has been abandoned.

- Several uranium mine proposals are now being reconsidered and four are undergoing assessment under the EPIP Act: Olympic Dam, SA (major expansion of current operations); Jabiluka, NT; Kintyre, WA; and Beverley, SA.

Research & Development Projects

A recent initiative of Environment Australia has been the formation of in-house *focus groups* to research as necessary specific issues relevant to EIA practice in Australia. Currently, the issues being addressed are strategic EIA and accreditation.

Strategic EIA

- Environment Australia, like many other agencies responsible for EIA, is closely looking at strategic assessments. In particular, we are reviewing our involvement in day to day classes or sectors of proposals with a view to a more efficient and effective EIA approach.

- We are increasingly moving towards undertaking an assessment of the decision-making framework, rather than the day-to-day decisions or approvals for individual projects that are made under frameworks. This approach is a more effective and efficient use of limited EIA resources, and can result in a more transparent and rigorous input to higher level policy and program development.

- We are also looking at using strategic EIA for a sector and regional approach, where the Commonwealth has clear jurisdiction. This is likely to involve a strategic assessment of offshore petroleum exploration and areas of particular sensitivity such as petroleum exploration and production off the North West shelf of Australia.

Accreditation

- In a Federation such as Australia, EIA occurs at all levels of government - Commonwealth, State and Territory and local. This raises issues of coordination and possible duplication and overlap. To overcome these problems, systems of joint and cooperative assessment and accreditation have been developed. Environment Australia is currently pursuing more effective accreditation processes between jurisdictions. A major review of environment roles and responsibilities of the commonwealth and State governments is currently underway in which accreditation features as a major issue. Following that review, a reshaping of environmental legislation is expected.

Training & Cooperative Activities

National EIA Practitioners' Network

- Senior practitioners from agencies with EIA responsibilities across Australia have met at various times in recent years to discuss a range of matters relating to EIA.

- Most recently, an EIA Practitioners' Network meeting was hosted by the Environment Australia. The meeting included representatives from a range of agencies, and the agenda covered current issues and developments relevant to EIA nationally, including the COAG review and implementation of ANZECC initiatives. The meeting also provided an opportunity for practitioners to catch up on changes in EIA legislation and practice in other jurisdictions.

Australian EIA Network

- Available on the Internet since August 1996, the Network was designed to open channels of communication between practitioners, proponents, consultants, academics and the public and to raise the quality and awareness of EIA within Australia and internationally.

- Australia is a geographically large continent, with a relatively small and dispersed population. For this reason, day-to-day contact between Government practitioners in the various jurisdictions was minimal and mainly project based. Development of the Internet-based network, its interactive mail centre and conferencing potential, has enabled Environment Australia to facilitate and maintain meaningful contact on policy matters in between the face-to-face meetings of the National EIA Practitioners' Network.

- The benefits of the Network are many and include increasing the transparency of our process, providing quick, timely and cost-effective access to relevant documents on EIA in Australia and internationally and facilitating public participation. It is also currently being used to support training initiatives such as the UNEP EIA Training Resource Manual and the IAIA EIA Training Course database through provision of case studies, bibliographic references and links to related sites.

ISSUES OF PRACTICE

Environmental Auditor

- In response to criticisms of the EIS for the Third Runway proposal at Sydney airport, the Senate Select Committee on Aircraft Noise recommended that a "parallel environmental audit" procedures should be available during the preparation of future EISs for significant airport proposals, with the auditor having access to the same data as the proponent.

- In response to this recommendation, the Commonwealth government appointed SMEC Australia Pty Limited to conduct an independent audit of the EIS for the proposal to construct a second Sydney airport.

- The auditor will review the methodologies and documentation relied on in preparing the EIS and report on the technical adequacy of the EIS. The auditor will also review the community consultation process, take account of community views on the proposal and report directly to the Government with its audit reports to be made public.

- This is the first time an environmental auditor has been involved in a Commonwealth EIS process.

Trans-border Issues

- A number of current proposals involving the commonwealth are being run in collaboration with a State or Territory EIA process, requiring the proponent to produce only one set of documentation and conduct one community participation program to satisfy the requirements of both jurisdictions.

- While arrangements for collaborative EIA within Australia are well understood and work in practice, new projects such as the Papua New Guinea/Queensland gas pipeline and offshore petroleum production proposals between Australia and Indonesia within the Zone of Cooperation, pose new challenges. Cooperative EIA process or mutual recognition systems have to be established with other countries that

have their own EIA and management regime that may not marry well with recognized Australian practice.

- Similar issues arise where Australian government entities such as the Export finance Insurance Corporation proposes to provide risk insurance or soft loans to overseas projects and the proposal is designated under the EPIP Act.

Involving indigenous People in EIA

- The importance of communicating with indigenous peoples and meaningfully involving them in the EIA process is becoming better recognized in Australia.

- Mines, for example, are often in isolated areas where the only communities likely to be affected are small, sometimes temporary, settlements of indigenous people. It is these groups that often have a strong cultural association with places that might be affected by the mine, as well as useful knowledge of local fauna and flora, hydrogeology and climatology.

- The conventional means of advertising proposals in the local press and waiting for written responses is not necessarily the best means of reaching these people. We are increasingly using face-to-face meetings to involve these groups, using local contacts to facilitate acceptance, and are investigating the use of video news clips in local languages to reach others.

Social Impacts

- The EPIP Act requires that social and cultural impacts are included as part of the Commonwealth EIA process.

- Impacts of individual projects may represent incremental additions to existing social problems in some areas and it is generally beyond the ability of the proponent of one project to address the overall impact of developments over time on the social fabric of a region.

- The proposed Jabiluka uranium mine is such a case. The Alligator rivers (Kakadu) Region in the Northern Territory has been subject to several mining and tourism developments over the last two decades and the local indigenous people argue that these developments have had primarily adverse impacts.

- A Kakadu Region social Impact Study is being funded by the Commonwealth government, the Northern Territory government and Energy Resources of Australia, the proponent for the Jabiluka proposal and manager of the existing Ranger uranium mine near Jabiru.

- The social impacts of the Jabiluka proposal itself will be addressed in the EIS for that project, but the outcomes of the study will no doubt be of interest to the Commonwealth Government in its overall assessment of the future of mining in the region.

FUTURE DIRECTIONS

Review of Commonwealth/State Roles & Responsibilities

- Council of Australian Governments (COAG) senior official agreed in May 1996, that the Intergovernmental committee for Ecologically Sustainable Development (ICESD) should be asked to report to COAG on Commonwealth/State roles and responsibilities for the environment.

- The objective of the review is to develop a more effective framework for intergovernmental relations on the environment which will facilitate improved environmental outcomes.

- The review is focusing on: the current status of intergovernmental roles and responsibilities for the environment; the current and emerging major environmental issues and trends facing the federation; identifying significant areas of overlap, duplication and gaps between spheres of government; and developing a framework and work program for the effective operation of Commonwealth, State, Territory and Local Government roles and responsibilities for the environment.

Environmental Legislation Review

- On April 3, 1997, the Minister announced that he expected to formally initiate a review of Commonwealth environmental legislation by the release of a discussion document in the second half of 1997.

- A key objective of the review will be to improve the level of protection for the environment. Much of the commonwealth's environment legislation no longer reflects best practice and the intention is to amend it to incorporate the principles of ESD and address in an integrated way the commonwealth's global and national responsibilities.

- In addition, the review of the Commonwealth's environment legislation will seek to reduce duplication, improve certainty for proponents and increase efficiency of the approval processes.

Senate Inquiry Into Environment Powers

- On March 26, 1997, the Senate resolved to refer matters relating to commonwealth environment Powers to the Environment Recreation, Communications and the Arts Reference Committee for inquiry and report by the last sitting day in February 1998.

- Matters referred to the Committee include the practically, adequacy and application of existing mechanisms to promote the national interest and achieve compliance with principles of ecologically sustainable development. Specific reference is made to EIA in or near high areas of conservation value in which the commonwealth has an interest and the consistency of guidelines for assessment process between all levels of government.

- The Committee will also be examining the most appropriate balance of powers and responsibilities between the commonwealth and the States and local levels of government to ensure consistency in all levels of government in environmental protection.

CONCLUSION

EIA as an instrument of environmental policy is well established in Australia with over twenty years of experience at the national level. However, the conduct of EIA is responding, as in other countries, to pressures within government and society. These include microeconomic reform within the Australian economy, changes in Commonwealth/State relations and the need to integrate the demands for economic development with those for environmental protection.

Recent years have seen a number of major developments in environmental policy at the Commonwealth level. These developments have had, and will continue to have, a significant impact on the way EIA is administered in Australia.

CONTACTS

For further information on the Commonwealth's EIA process and procedures in Australia or any of the issues identified in this paper, please contact Environment Australia (Environment Protection Group) at 40 Blackall Street, Barton ACT 2600, AUSTRALIA (Facsimile: +61 6 274 1620) or access the Australian EIA Network at:

http:/www.environment.gov.au/net/eianet.htrnl

BENIN'S EXPERIENCE WITH ENVIRONMENTAL ASSESSMENTS

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INTRODUCTION

The environmental awareness expressed by the international community at the United Nations Conference in Stockholm, Sweden, in 1972 was bolstered in the 1980s by the World Commission on Environment and Development, which focused public concern on the need for policies and practices to promote sustainable development.

Like all developing countries, Benin did not join the movement until the early 1990's.

The establishment of the Ministry of Environment, Habitat and Town Planning in 1992 and the preparation and adoption of an Environmental Action Plan in 1993 marked the successful launching of a legal and institutional framework in which the environmental assessment process plays a significant role.

While the concern to assess the environmental impacts of projects in Benin is thus recent, the tools that have been created and are being put into practice are equal to the size of the challenge.

I. THE INSTITUTIONAL AND LEGAL FRAMEWORK

In keeping with the recommendations and conclusions of the national conference, the Constitution of 11 December 1990 placed particular emphasis on environmental protection in

-article 27:

"Every one has a right to a healthy, pleasing and sustainable environment and the duty to protect it. The State is responsible for the protection of the environment."

-article 28:

"The stockpiling, handling and discharging of toxic or polluting waste from factories or other industrial or cottage industry facilities within Benin are regulated by law;"

-article 29:

"The transportation, importation, stockpiling, burial or spilling within Benin of foreign toxic or polluting waste and every agreement relating thereto constitutes a crime against the nation. The applicable punishments are defined by law;"

-article 74:

> "Where the President of the Republic violates the oath of office, is found to be the author, co-author or accomplice of aggravated, specific offenses against human rights, cedes a part of the national territory or commits an act that is endangers the maintenance of a healthy, pleasing and sustainable environment that is favourable to development."

To provide an adequate institutional framework that will promote these constitutional provisions, a Ministry of Environment, Habitat and Town Planning has been created. It is responsible for

- defining and implementing Benin's environmental policy; and
- environmental regulation and compliance monitoring.

Under the influence of this new institutional tool, analysis at the national level of environmental assets and constraints with reference to Benin's development has resulted in the development of a new strategic framework for managing the environment, i.e., the **Environmental Action Plan, adopted in 1993.**

Implementation of the Environmental Action Plan required a flexible, effective and non-sectoral institution. For this purpose, the **Benin Environmental Agency** was created in 1995.

Under the supervision (tutelage) of the Ministry of the Environment, Habitat and Town Planning, the Benin Environmental Agency is a public establishment of an administrative nature, with corporate status and financial independence.

The Agency, with the participation of all competent national institutions, is responsible for implementing national environmental policy. It ensures that environmental concerns are incorporated into policy and/or sectoral strategies.

It is responsible for

- planning and follow-up for the Environmental Action Plan;
- conducting impact studies and environmental audits;
- evaluating impact studies;
- establishing and monitoring the Environmental Information and Follow-Up System network;
- preparing the report on the state of the environment;

- participating in producing learning materials for relevant organizations;
- providing assistance to local communities in developing and implementing local environmental policies;
- preparing and implementing environmental awareness campaigns;
- contributing to the development and implementation of the Environmental Information, Education and Communication plan;
- developing terms of reference for studies to define standards in connection with the relevant services in the various government departments;
- participating in follow-up and monitoring compliance with discharge standards;
- participating in the preparation of procedures, follow-up and implementation of emergency environmental plans.

Pursuant to **article 98 of the Constitution**, which provides that *"the protection of the environment and the conservation of natural resources fall within the purview of the law"*, and in application of *Program No. 7 (Institutional, Legislative and Environmental Information System Framework of the Environmental Action Plan,* the Agency developed the environmental framework legislation.

The framework environmental legislation expresses the government's political will to control deterioration of the environment both in rural and in urban settings.

II. PRINCIPLES OF THE FRAMEWORK LEGISLATION

A number of management and environmental promotion and protection principles underlie the framework legislation. The following are enshrined in the legislation:

- **polluter pays:** any act detrimental to environmental protection incurs direct or indirect liability for its author who is responsible for making good the damage;
- **participation by society:** the various social groups must intervene at all levels in formulating and executing national environmental policy;
- **intergenerational equity:** our use of resources and the environment must not mortgage the future of coming generations; and
- **pre-vetting** activities that may be harmful to the environment through impact studies.

III. FEATURES OF THE FRAMEWORK LEGISLATION

The framework legislative is innovative by:

- Its emphasis on **transparency** and **information.**
  Example: -the publication of Impact Study reports

- Its emphasis on **public participation** in the implementation process.
  Examples: -public hearings that afford the public an opportunity to express its concerns in respect of any project having an impact on its life style.
  -associations recognized as competent in environmental matters will be able to take public action by constituting themselves as private prosecutors.

- **The integration** of environmental concerns with national planning.
  Example: -the creation of a National Commission for Sustainable Development

- Its emphasis on **administrative and institutional tools.**
  Examples: -Establishing procedures for Environmental Impact Studies and public hearings
  -The creation of the Benin Environmental Agency

Title V of the framework legislation establishes various procedures for Environmental Assessment, namely: Environmental Impact studies, Environmental Audits and Public Hearings.

With regard to procedures and the implementation process, Benin does not depart from standard procedures used in other countries for nearly 20 years. However, certain details should be highlighted.

IV. ENVIRONMENTAL IMPACT STUDIES IN BENIN

The environmental framework legislation provides in **Part V** (Titre V) for various environmental assessment procedures, including

-Environmental Impact studies;
-Environmental Audits; and
-Public Hearings.

From a regulatory standpoint, the procedures and processes relative to each procedure are based on the experiences of other countries but with adaptations reflecting the specific nature of the national context.

Environmental Impact Studies

The process is led and co-ordinated by the Benin Environmental Agency through its Department of Environmental Assessment and General Studies. At the Agency, this department has only two officers and its action strategy is based on the Environmental Impact Study Task Force. The Task Force is a forum of experts of national standing selected on the basis of their experience and skill from various public and private institutions. The Task Force meets at the request of the Agency, whenever it is necessary to study or prepare any document or file on environmental impact studies. This approach allows the Agency to operate with a minimal staff, to ensure the on-going cooperation of all these institutions and respects the principle of broad participation in decision-making.

The environmental impact study process in Benin has retained the main steps in the process consisting of

-Screening (pre-screening)
-Scoping (scanning)
-Public hearings
-Analysis of the environmental impact study report
-The decision
-Follow-up-assessment-audit

With regard to screening, the work will be decentralized and given to the ministries responsible for the various sectors affected by the projects and programs. The fact that the Task Force will number members from these institutions and the availability of work tools such as the check-list, the standard TDR and the environmental impact study guide will make implementation of the screening stage possible at their level. Only project files requiring a summary or full environmental impact study will be dealt with at the Agency.

Public hearings

They are arranged by the Minister of Environment through creation of an ad hoc Public Hearing Commission. There is a report publication phase. The purpose of publishing the report is to inform the various players and above all the local public of what is involved in the project planned. Publication will be done thorough the mass media (rural radio, primarily), but in particular by non-governmental agencies (NGOs), whose training and promotion are currently handled by the Agency.

The decision

The Minister of Environment, on the advice of the Agency, which is responsible for analysing the environmental impact study report, issues a notice of environmental compliance. The decision to implement a project or program is made by the Minster responsible for the sector concerned and for that purpose he must take into account the notice of environmental compliance, the technical feasibility study and the economic feasibility study.

With regard to the procedures, **article 9** provides that the Minister of Environment has a duty to publish the environmental impact study, but cannot call public hearings. In that situation, there is a possibility (**articles 100 and 101**) for any individual or corporation to constitute itself as a private prosecutor and bring the matter before the competent administrative jurisdiction.

V. ENVIRONMENTAL IMPACT STUDIES AT THE NATIONAL LEVEL

Implementation of environmental impact studies in Benin at first followed the procedures used by development partners such as the World Bank, the African Development Bank and so on. But **enactment of the framework legislation in 1995** by the government made possible the establishment of a procedure at the national level. Thus, the Environmental Impact study of the Adjarala Dam Project, having begun by using the lenders' procedure will now have to be completed and analyzed following Benin and Togo's national procedures.

The intervention of a specialized institution like the Agency in the analysis of an environmental impact study report on the Adjarala Dam brought numerous inadequacies to light and included recommendation that the studies be partially revisited to improve comprehension and take into account down-stream impacts.

The realization of the Adjarala project in the light of the problems encountered with the Nangbeto Dam upriver is a genuine textbook case used by the Agency to train national environmental impact study experts with the support of the World Bank.

Other environmental impact studies are in progress at the national level:

-the environmental impact study on the Development of classified forests on mounts Kouffé, Wasi-Maro and Agoua;

-the environmental impact study on the Hevié garbage dump project.

Terms of reference are being developed for environmental impact studies on

-the industrial free zone
-the Lake Toho fish-farming project
-the shrimp raising project
-Phase III of the animal production development project
-the Aborney-Calavi Plateau urban development plan

VI. PROBLEMS AND TRIAL SOLUTIONS

The main problems relating to the implementation of the environmental impact study procedure can be expressed in terms of

Lack of capacity

National expertise is lacking at every level. This problem involves both technical personnel and other players (research department, NGOs, and so on)

Difficulties in assessing environmental impact studies

From a methodological point of view, in terms of gathering information, analysing results and presentation of documents, the environmental impact studies are of all kinds. This creates problems when the time comes to conduct the assessment.

Solutions

- Establishing a training program for technical staff (Task Force members, research departments, NGOs and other players;

-Partnership programs with other countries involving some travel in order to exchange experiences and technical and logistic support.

STATUS AND PROGRESS OF EA IN CANADA

CANADIAN ENVIRONMENTAL
ASSESSMENT AGENCY

Sid Gershberg, President
and
Robert G. Connelly, Vice-President

BACKGROUND

The Canadian Environmental Assessment Agency (the Agency) is guided by the following instruments:

- the *Canadian Environmental Assessment Act* (the Act, implemented in January 1995) and its regulations;
- the *James Bay and Northern Quebec Agreement* and the *North Eastern Quebec Agreement* (the President of the Agency is the federal administrator of the environmental and social protection regimes in these agreements);
- the 1990 Cabinet Directive on the *Environmental Assessment of Policy and Program Proposals* (Policy EA);
- bilateral agreements with provinces to coordinate EA procedures across jurisdictions; and
- international agreements containing EA provisions, e.g. the *North American Free Trade Agreement.*

The Act has four objectives:

- to ensure the environmental effects of projects are considered before the government takes action;
- to promote sustainable development;
- to ensure that projects carried out in Canada or on federal lands do not cause significant adverse environmental effects in other jurisdictions; and
- to ensure that the public has an opportunity to participate in the EA process.

Federal departments must conduct an EA before they carry out a project or where they provide money, land or any license or authorization that would allow the project to proceed.

The Act establishes four types of assessment to provide flexibility in assessing projects of varying scale and complexity:

- screening,
- comprehensive study,
- review by a mediator,
- review by a panel.

RECENT DEVELOPMENTS

Recent changes in EA law, process and procedure all relate to better refining, interpreting and operationalizing the Act and the Cabinet Directive on Policy EA , and to harmonizing federal EA requirements with those of the provinces. Key recent developments include:

Regulations

- Federal coordination regulation to ensure federal EAs are efficiently coordinated among federal departments;

Process and Procedures

- *Procedures for an Assessment by a Review Panel* were drafted in response to pressure from all sectors for greater effectiveness and efficiency and include specified timelines, increased notice time for hearing participants, and mandatory public meetings to discuss the adequacy of the Environmental Impact Statement;
- a pilot project to explore the potential of non-legislated standards to improve the quality and efficiency of EAs;
- the development of agreements with various provinces to ensure one EA process is used to meet the requirements of both jurisdictions;
- the development of procedures and guidance on class screenings to encourage wider use within the federal government

Training

- the development of training modules on implementation of the Act and the Cabinet Directive to encourage compliance by federal departments
- the development of various guides for federal departments on specific aspects of the Act, i.e. follow-up programs, cumulative environmental effects, traditional ecological knowledge.

Cost Recovery

- Implementation of a proposal to recover costs of EAs (panels and comprehensive studies)

ACTIVITIES UNDERTAKEN

The following EAs have been completed or are in progress since implementation of the Act:

- 10,000 screenings
- 25 comprehensive studies
- 7 panel reviews

- **Research and Development**

During the last year the Agency has consulted broadly with the EA community to develop a national R&D agenda for EA in Canada and to explore approaches to managing such an agenda. The feasibility of one approach, the establishment of a National EA Center of Excellence composed of representatives from the EA community, is currently under review.

ISSUES OF PRACTICE

The practice of EA in Canada today is subject to a number of competing pressures. Fiscal restraint means diminishing government resources, and increased emphasis on cost-recovery, harmonizing regimes across the country to reduce duplication, and deregulation. The Canadian public expects EA to fulfill its promise of sustainable development while some in the private sector and government view EA as expensive, time-consuming and a barrier to economic development. Following are the priority issues facing the Agency and EA in Canada:

Program Review and Fiscal Restraint

Many federal departments are experiencing program review and budget reductions. The Agency is facing increasing pressure to become more involved in specific project EAs, rather than limiting its activities to general policy and process advice. The challenge for the Agency will be to promote the benefits of a longer term approach to EA and compliance with the Act.

Fiscal restraint has prompted a number of measures pertaining to the cost recovery of federal goods and services. The Agency has examined, in consultation with other departments, provinces and stakeholders, several proposals for recovering costs attributable to EAs, as well as options for streamlining procedures and timelines for the EA process (see next paragraph). Implementation of cost recovery for panels and comprehensive studies will occur over the next year.

Regulatory Reform

Although the Act sets out clear rules for federal EAs, there is increasing pressure from some sectors of industry to add greater certainty in the area of time frames and procedures. The Agency's challenge is to continue to improve the efficiency of the regulatory process, and in so doing encourage and facilitate compliance with the Act.

Perception of EA

Many within government and the private sector view EA as an impediment to economic development and international competitiveness. The EA process is

perceived to be time-consuming and expensive with little, if any, tangible benefit. As a result some try to avoid or circumvent the EA process. The challenge for the Agency is to better communicate and inform decision-makers and others of the benefits and efficiencies that can be realized through a properly conducted EA.

EAs outside Canada

The Agency is currently addressing questions concerning the application of EA to projects outside Canada, specifically to export development credits and loan guarantees. A better understanding of current international practices and experience on this issue would be helpful, specifically the extent to which other countries currently subject such projects to EA and if so, how such EA s are conducted.

Federal - Provincial Relations

Multilateral harmonization is being pursued by the Canadian Council of Ministers of Environment to establish a Canada-wide environmental management framework. The objective is to ensure that EA is consistent and better harmonized, while striving for the highest level of environmental protection for all Canadians.

Aboriginal Affairs

Aboriginal self-determination through various initiatives is placing considerable pressure on the Agency. The Department of Indian Affairs and Northern Development is in the process of negotiating comprehensive land claim and self-government agreements with various Aboriginal communities which include provisions for EA. In addition, the Act directs the development of Indian lands and funding regulations to provide First Nations with greater EA responsibilities. Therefore, it is vital that the Agency maintain existing federal standards for EA. In addition, Aboriginal EA processes should be developed that are consistent with the Act and allow for effective and efficient harmonization.

FUTURE DIRECTIONS

Some practical measures can be considered to address some of the issues outlined above:

- Continue to improve the efficiency and effectiveness of environmental assessment;
- Continue efforts to harmonize various EA regimes within Canada while maintaining highest standards;

- Communicate and demonstrate the long term utility and benefits of EA to decision makers and others;
- Continue development of: practical guidelines and procedures for key EA components such as cumulative environmental effects assessment and follow-up programs; and of priority regulations as specified in the Act;
- Improve information exchange among EA managers and professionals, perhaps through an electronic network; and
- Explore the feasibility of establishing a National EA Center in Canada.

TWENTY YEARS OF IMPACT ASSESSMENTS IN FRANCE: TAKING STOCK AND WHAT THE FUTURE HOLDS

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and
Monique Turlin

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SUMMARY

Introduction

I-Components of the French System

1. Origins
2. Characteristics
3. Trends

II - Outside Influences

1 - Supranational Legal Structures

- European law: Community directive on assessing project impacts, amended in March 1997; draft directive on assessing the impacts of plans and programs
- international law: UN/ECE convention done at Espoo on environmental impact assessment in a transboundary context, UN/ECE draft convention on information and public participation in environmental matters.

2. The Development of Networks for the Exchange of Information and Experience:

- Bilateral:
- International:
  International Association for Impact Assessment, international study on the effectiveness of environmental assessments
- Francophone: official Francophone network, IAIA
- Francophone secretariat

III - The Future of Impact Assessments in France

1. Recent Legislation to be Implemented in the Area of Impact Assessment

- The law on air pollution of 30 December 1996
- The European directive of 3 March 1997, amending the 1985 directive concerning the assessment of impacts on the environment of certain public and private projects

2. Legislation in Preparation

- Proposed European directive on the assessment of impacts on the environment of certain plans and programs
- The draft UN/ECE convention on information and public participation in environmental matters

3. Celebrations for the 20th anniversary of Impact Studies

- Preparatory work
- Colloquium on the 20th anniversary

INTRODUCTION

1997 will be certainly be a decisive year for France in the history of impact assessments:

This year France is celebrating 20 years of impact assessments. This is sufficiently noteworthy in itself to merit celebration; over and above the symbolic aspect of this number, 20 years' practice provides enough experience and distance for us to take stock of the situation;

In the area of impact assessments, 1997 has seen a feverish level of activity both in terms of the abundant production of standards or proposed standard-setting legislation at the domestic, Community and international levels and in terms of the development of exchanges within governmental and non-governmental associations alike.

The French Department of the Environment has therefore decided to take advantage of this double fact to organize some "grand maneuvers" on the impact assessment front.

Before briefly presenting the objectives and functioning of these operations, a short reminder of the components of the French system and the influences it has undergone is in order.

I. COMPONENTS OF THE FRENCH SYSTEM

1. Origins of the French System

A number of comments may be made on the origins of the French system:

- **the impact assessment tool came to France in an almost happenstance fashion, without preparation**

In France the birth of the "impact assessment" goes back to 1976: the principle was almost haphazardly introduced through a parliamentary amendment, in the Law of 10 July 1976 on the protection of nature, primarily through pressure from the ecology movement.

The legislation thus preceded the facts: the system was designed in a fairly abstract manner, not on the basis of acquired experience or know-how. These origins probably led to various design flaws.

- **historically, France is the first European country to adopt the principle of conducting an impact assessment of a project prior to its implementation.**

France was rather in advance of the other European countries and played a major role in the debates concerning the preparation of the Community directive adopted in 1985. The French system by and large inspired the Community system, but conversely the French legal principles of the impact studies were not much influenced by Europe. Where many member States of the European Union took the identical principles from the Community principles, France did not change the general aspect of its system but retained the specific differences that make it altogether different from the other member States in the European Union.

The French system is based on the American model, without however incorporating components that do not fit well with the French legal and administrative system.

2. The Founding Principles of the French System

The French system of environmental impact assessments is above all characterized by its rootedness in a very positive and normative Roman legal tradition.

For French-style impact assessments, the principles are as follows:

- an assessment principle affecting only projects and not strategic decisions;
- the broad scope of its application: impact studies are the rule and exemptions the exception;
- the scope of application is fixed, defined by decree, on the basis of thresholds and criteria that are sometimes technical, sometimes legal and sometimes financial;
- a unique regulatory definition of the contents of impact studies, common to all types of projects in all types of environments, the only exception being those for "classified installations" (polluting industrial and agricultural installations) which are organized by procedural decrees to have a slightly different impact study content;
- the inclusion of an "impact file" in the regulatory procedures for each category of operation, and review of these files by traditional administrative services;
- an impact study published before the work begins;
- no systematic intervention by specialized environmental services over assessments in general, but a consultation for opinion on major infrastructure projects in the context of a joint review and the possibility of transferring other projects over to the Minister of Environment for an opinion on the impact study.

3. Domestic Developments

Improvements and adjustments have been made to the system over the years, without altering the general outlines of the system, however:

- **Improvement of information and public participation**

Various additions to the Law of 12 July 1983 on the democratization of public inquiries and environmental protection have created a public "environmental" inquiry procedure which is now used as to support the impact study. The Law of 2 February 1995 created a public discussion commission which can organize public debates prior to a public inquiry, for major public projects.

- **Improvements in the impact assessment process**

Since the Law of 10 July 1976 and the general decree on impact studies of 12 October 1977, various additions or corrective amendments have been made to the legislation to improve its effectiveness and ensure the most far-ranging and full integration of environmental concerns throughout the project development process:

- the **decree of 25 February 1993** made the necessary adjustments and additions to make impact studies more effective in their field of application, content and procedure;

- the **Law of 2 February 1995 on strengthening protection for the environment** provided for accompanying statements of public utility with measures designed to reduce the effects of the project on the environment and introduced the principle of public debate prior to implementing major development projects.

II. OUTSIDE INFLUENCES

But the law and practice of impact assessments in French has ceased for several years to operate in a vacuum and has been subject to various influences. It now forms part of various supranational contexts which orient its principles and enrich its content at a number of levels and in a framework that is sometimes inter-governmental and sometimes non-governmental.

1. Supranational Legal Structures

- **The European directive of 1985 on the assessment of the impact of public and private projects on the environment**

The European Community adopted on June 27, 1985 a directive concerning the impact of certain public and private projects on the environment. This Community directive was greatly inspired by the pre-existing French system but in turn had an effect on the principles and concepts of domestic law.

- **The UN/ECE Convention on Environmental Impact Assessment in a Transboundary Context,** done at Espoo (Finland) in 1991, not yet ratified by France, will necessarily introduce new processes.

2. The Development of Forums for the Exchange of Information and Experiences

The system benefits from and is marked by foreign experience through the development and increase of forums for exchanges:

- at the bilateral level: privileged bilateral relations (in particular, co-operation with Quebec),
- at the international level: the IAIA, an international study on effectiveness of impact assessments,
- at the Francophone level: constitution of an official Francophone network, creation of a Francophone secretariat in the IAIA.

III. THE FUTURE OF IMPACT ASSESSMENTS IN FRANCE

1997 marks an opportunity for the French Ministry of Environment to make a report on the system and contemplate its development, to learn from the experience it has acquired, and to integrate into domestic law and practices new structures or concepts from recently enacted domestic and European Community legislation, or to anticipate pending legislation at the European and international levels.

1. Recent Pending Legislation in Impact Assessments

- **The Law on Air of 30 December 1996** broadened the scope of impact assessments to include an analysis of the health effects of all the projects and an evaluation of the collective costs of pollution and damage for transportation infrastructures. This involves including in the impact assessment process areas of study and structures that are completely new and which work more broadly on impact assessments in human and economic terms. The new provisions will come into force in August 1997.

- **The European directive of 3 March 1997** amending the directive of 1985 on the assessment of impacts of projects introduced into Community law the common law concepts of screening and scanning, which France should, at least in the second case, include in its practices. At the same time, it gives member States in the European Union that could be affected by local projects carried out on the territory of other member States the possibility of actively

participating in the environmental assessment procedure. The amended directive must be enacted into the various domestic legal systems in March 1999.

2. Pending Legislation

- **The draft European directive on the assessment of impacts on the environment of certain plans and programs**

The Commission has adopted and transmitted to the Council of the European Union a draft directive in this sense. This project may be discussed and adopted by the Council and thus be imposed on the member States in the fairly near future.

The French Ministry of Environment, which has already been involved in reflection and methodological studies on impact assessments of strategic decisions, notably in the area of transportation infrastructure schemes, will necessarily put this subject on the agenda of the celebrations it is organizing in 1997.

- **The draft UN/ECE convention on environmental information and public participation:**

This draft convention, which may be signed by the end of 1997, provides for a public participation process at an earlier stage and in greater depth than the public hearing procedures, even as improved, that exist at the present time in France for most projects.

3. Celebrations for the 20th anniversary

In anticipation of the 20th anniversary of impact assessments, the Ministry of Environment undertook in the fall of 1996 preparatory work scheduling the celebrations for the fall of 1997.

- **Preparatory work**

In preparation for the October 1997 celebration, the Ministry of Environment has brought together by network, in the closing months of 1996 and the beginning of 1997, representatives of all players involved in the impact assessment project (foremen, contractors (research departments), decision-makers, associations, teachers and researchers). The objective was to take stock of the achievements of 20 years' experience with impact studies and to take a look at what the future holds in store for the system in the light of successes and innovations introduced by recently enacted or pending legislation. The findings of this preparatory phase will be discussed at a seminar organized in several weeks with the participants.

- **Celebration of October 1997**

The Ministry of the Environment will organize a celebration in the Fall, 1997, around the 20 years' anniversary date of the decree of 12 October 1997 on impact studies, a celebration that will be an opportunity to present the results of the preparatory work and resulting proposals.

STATUS AND PROGRESS OF ENVIRONMENTAL ASSESSMENT IN HONG KONG

FACING THE CHALLENGES IN THE 21ST CENTURY

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BACKGROUND

Hong Kong has more than 15 years of experiences in applying the environmental impact assessment to development proposals. The development and key milestones can be seen in the attached Figure 1. The major benchmarks of EIA development are:

(a) **ad hoc application of EIA to projects (1980 to 1986):** the EIA process was at an embryonic form and was applied to selective private sector and public sector projects such as power stations, major industrial developments, and roads;

(b) **systematic application of EIA to public works projects (since 1986):** the first government directive was introduced to apply the EIA process systematically to public works projects;

(c) **strategic environmental assessment of plans (since 1988):** the government EIA directive was strengthened to extend the applications of the EIA process to planning of new development plans. It marked the application of what others called strategic environmental application (i.e. the environmental assessment of plans) in Hong Kong;

(d) **application of environmental monitoring and audit process (since 1990):** environmental monitoring and audit requirements were formulated and applied major projects such as $20 billion worth airport core programme projects. In 1992, the environmental monitoring and audit requirements were formalised in the revised government EIA directive and hence extended to all major developments in both the public and private sector;

(e) **strategic environmental assessment to policies and strategies (since 1992):** since 1992, there was a policy requirement set out by the Governor to require all major policy or strategy submissions to the highest level of decision making body (the Executive Council) in Hong Kong to explain the environmental implications and include information on environmental benefits and disbenefits and measures to be taken to deal with adverse environmental consequences;

(f) **public access to EIA reports (since 1992):** a policy was promulgated to make the EIA process more transparent by requiring government proponents or public corporations to make available the EIA reports to and consult the public;

(g) **establishment of EIA sub-committee under the Advisory Council on the Environment:** a dedicated sub-committee was set up under the Governor's appointed Advisory Council on the Environment, which comprise non-official members from environmental organisations,

industrial and commercial organisations, academics, professionals and Legislative Councillor, to vet and review EIA reports. This is a major step to enhance the credibility and transparency of the EIA system in Hong Kong.

RECENT DEVELOPMENTS

Very significant progress has been made in the past 2 years in advancing and strengthening the EIA system in Hong Kong, not least in the following areas.

Enactment of Environmental Impact Assessment Ordinance

After more than 2 years of law drafting, 2 years of discussions and consultation among the Hong Kong community and more than 8 months of debate at the Legislative Council, the Environmental Impact Assessment Ordinance was enacted in January 1997 and would come into effect in early 1998. The EIA Ordinance, among other things, would apply to feasibility study EIAs and project EIAs and would make the EIA recommendations legally enforceable, including the provisions for requiring environmental monitoring and audit. Figure 2, 3 and 4 show the coverage and the key process requirements under the EIA Ordinance.

Technical Memorandum on Environmental Impact Assessment Process

In pursuant to the provision in the Environmental Impact Assessment Ordinance, the Technical Memorandum on Environmental Impact Assessment was published in Hong Kong Government Gazette on 16 May. This Technical Memorandum is a legal instrument provided for in the Environmental Impact Assessment Ordinance to guide the Director of Environmental Impact Assessment in making key decisions on the environmental impact assessment process. This Technical Memorandum gives clear-cut, transparent guidelines and criteria for the EIA process and represents the state-of-the-art best practices in Hong Kong in screening and scoping, conducting assessments, reviewing EIA reports and evaluation of impacts.

Generic Environmental Monitoring, and Audit Manual

To further consolidate Hong Kong experiences on environmental monitoring and audit, a generic environmental monitoring and audit manual was published and widely disseminated among professionals in Hong Kong and overseas.

Policy on Off-site Ecological Mitigation Measures

In a positive response to the policy issue raised by the Advisory Council on the Environment during their scrutiny of EIA in the past 2 years, the Hong Kong Government has established and promulgated in February 1997 a policy on off-site ecological mitigation measures to be adopted in the EIA process.

Transboundary EIA

The first ever transboundary EIA between China and Hong Kong for the Shenzhen River Regulation Project was endorsed by both governments and the Hong Kong's Advisory Council on the Environment in the end of 1995. This provides a solid foundation for future transboundary collaboration on EIA.

Strategic Environmental Assessment of the Territorial Development Strategy in Hong Kong

This is the most comprehensive strategic environmental assessment ever completed in Hong Kong. The findings of the strategic environmental assessment were presented to the Advisory Council on the Environment in July 1996, made available to the public and included in the public consultation document for wide consultation in Hong Kong from July to December 1996. This strategic environmental assessment has informed the public debate and raised the community awareness on the need for environmentally sustainable development in Hong Kong.

Study on Sustainable Development for the 21st Century

In response to the sustainability issues raised in the strategic environmental assessment of the Territorial Development Strategy, the Hong Kong Government is in the process of commissioning a major consultancy study to map out the strategy and framework for achieving sustainable development in Hong Kong in the 21st century. The study would commence this year.

Establishment of Hong Kong Institute of Environmental Impact Assessment

This institute was established in 1996 and now has more than 150 professionals and academics as members, many of which have extensive international working experiences. This is a major boast to institutional capacity on EIA in Hong Kong.

ACTIVITIES UNDERTAKEN

Environmental Assessments Undertaken

There was 117 environmental impact assessments completed or on-going in 1996. These environmental impact assessments cover major reclamations, roads, port developments, railway developments, new town developments, and sewage treatment facilities. Among these EIAs, about 20 environmental impact assessments were selected for presentations to the Advisory Council on the environment. Of the 30 strategic planning studies going on in 1996, about 10 of them are being subject to some form of strategic environmental assessment studies. About 64 major projects are undergoing environmental monitoring and audit programmes. About 180 submissions to the highest level decision making body

(the Executive Council) and the Legislative Council funds approving body (the Finance Committee) had included the environmental implications sections.

Research and Development Projects

The major development projects are the formulation of the Technical Memorandum on Environmental Impact Assessment Process, through a very extensive consultation with all relevant professionals and academics in Hong Kong. About 60 organisations were consulted; numerous seminars were held and attended by over 100 professionals; and many consultative bodies were consulted.

The publication of the generic environmental monitoring and audit is another in-house research project undertaken by Hong Kong Environmental Protection Department.

Training and Co-operative Activities for Professional Strengthening

Extensive professional networking and cooperative efforts were made in 1996 and 1997 aimed at strengthening the institutional and professional capability, including:

(a) Hong Kong Environmental Protection Department organised and chaired a workshop on EIA follow-up and Management as part of the IAIA '96 programme;

(b) a program of exchange of EIA experiences and workshops were held with Western Australia's Department of Environmental Protection in November 1996 and February 1997;

(c) a Netherlands-Hong Kong EIA Workshop was held in December 1996 in Netherlands to exchange experiences on EIA;

(d) a Guangdong-Hong Kong EIA workshop was held in Guangzhou in China in May 1997, with participation of representatives from 8 cities and more than 10 institutions.

ISSUES OF PRACTICES

The key trends and challenges of EIA process management and practice are to make the system more effective, more practical especially in dealing with strategic environmental assessment, more usable, more efficient and transparent, and more accountable.

Making the system more effective

The Environmental Impact Assessment Ordinance enacted in January 1997, will make it a mandatory requirement for major feasibility studies and projects with potential for adverse impacts to conduct environmental impact assessment, and make the

implementation of EIA recommendations legally binding through an environmental permit system. There is also a legal provision for requiring environmental monitoring and audit programmes to be implemented.

Apart from implementing the Environmental Impact Assessment Ordinance, more and more policy or territorial-wide issues are being picked up and tackled upfront through strategic environmental assessment or a policy directive such as the one for off-site ecological mitigation measures.

Making the system more practical

The focus is to work out more practical approaches and tools in applying the EIA process to policies and strategies, and in integrating environmental considerations with transport, energy, economic and infrastructure development policies, in a more effective way and in a timely manner. This is being addressed through the development of pragmatic, simplified, workable semi-quantitative evaluation and assessment tools for assessing and evaluating scenarios at a conceptual and territorial level. One of the example is the assessment tools and methods adopted in the strategic environmental assessment of the territorial development strategy.

Making the system more usable

Effort is now focused around the key decision nodes such as the funding approval and the submission to the highest decision making body (the Executive Council) for approval, in ensuring that the environmental implications and the findings of EIA are credible and truly presented in an understandable manner, including explicit commitments by proponents and clear statements on residual environmental impacts.

Making the system more efficient and Transparent

This is being tackled through developing more clear and transparent decision rules and guidelines for the conduct of EIA and for reviewing the adequacy and acceptability of EIA reports. This is being addressed through the consolidation of Hong Kong's past 15 years of EIA best practices and experiences into a legal technical instrument, called the Technical Memorandum on Environmental Impact Assessment Process published under the newly enacted Environmental Impact Assessment Ordinance. This would greatly enhance the efficiency as considerable time and efforts can be saved in sorting out guidelines and criteria on a case by case basis. The clear-cut guidelines and criteria would facilitate the proponents and their consultants to get things right in the early stage of planning.

Also under the Environmental Impact Assessment Ordinance, there are well defined statutory time limits ranging from 30 to 60 days for the authorities to respond to proponents.

To minimise duplication of efforts and hence the associated inefficiency, the EIA Ordinance provides for tiered assessments - one at the feasibility study EIA, and the other project EIA - and allows the use of previously approved reports without the need to repeat the assessment of issues that have been dealt with.

To further enhance the efficiency of the system, projects with less potential for impacts or those projects that have well defined standard measures, are now being dealt with through a class assessment approach, and are excluded from the EIA Ordinance.

Making the system more participatory and accountable

Under the newly enacted Environmental Impact Assessment Ordinance, the public would be given the opportunity to provide inputs to the formulation of the EIA study brief and to comment on the EIA reports, before a decision is made on the EIA report. The law also formalises the existing arrangements to consult the Governor's appointed Advisory Council on the Environment which comprises members from green groups, industrial organisations, academics and professionals. All these would be conducted in a well defined framework set out in the EIA Ordinance and the Technical Memorandum. To ensure check and balance and reasonableness, there are provisions for appeal by proponents to an independent appeal board. All EIA process documents and all key decisions by the Director of Environmental Protection would be made available to the public for inspection through a public register. The environmental monitoring and audit reports would also be made available to the public to enhance the accountability.

FUTURE DIRECTIONS

The future direction of the Hong Kong EIA system is towards further strengthening of the application of strategic environmental assessment to policies and strategies through a combination of bottom-up and top-down approaches. The Study on Sustainable Development in the 21 Century for Hong Kong, which will commence this year and would last for about 30 months, would include an extensive environmental stock-taking exercise, initiate an aggressive public education and consultation process, develop sustainability principles, criteria and guidelines and formulate a sustainable development framework for Hong Kong. Such a framework (see Figure 5) would provide an effective policy backing and practical yardsticks for the future conduct of strategic environmental assessment in Hong Kong and for environmentally sustainable decision making in the 21st century. This is the area where Hong Kong could benefit from international cooperation.

CONCLUSIONS

Hong Kong has made significant strides in the past two years in strengthening the EIA system through the enactment of Environmental Impact Assessment Ordinance, the publication of a legal technical instrument called the Technical Memorandum on Environmental Impact Assessment Process, the continued application of the strategic environmental assessment to policies and strategies, and the continued development of practices on environmental monitoring and audit. The EIA Ordinance is an important addition to the set of tools and mechanisms that Hong Kong now has to achieve sustainable development. There is, however, no room for complacency. To make environmental assessment a tool for sustainability assurance, further developments would be needed to develop a clear, workable sustainable development framework with clear yardsticks and criteria for evaluating policies or strategies. The Study on Sustainable Development for the 21st century has come in at the right time to look at all these important issues. With the professional and institutional capacity built up over the past two decades, Hong Kong is well placed to face the challenge of making environmental assessment an effective, usable tool for sustainability assurance, and to continue its contribution to the international development in advancing best practices in the field of environmental assessment.

May 1997
Hong Kong Environmental Protection Department

STATUS AND PROGRESS OF ENVIRONMENTAL ASSESSMENT IN JAPAN

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I BACKGROUND

Japanese government introduced the idea of EIA in 1972, when the cabinet approved guidelines under the title of "On the Environmental Conservation Measures Relating to Public Works". However, this guideline did not describe any EIA procedure. The Environment Agency, which was established in 1971, had since 1975 been preparing to have a uniform EIA procedure legislated.

In 1981, the Environment Agency finally succeeded in persuading other ministries and agencies to submit an EIA bill to the National Diet. However, the bill was not put to the vote, and when the House of Representatives was dissolved in November 1983, it became null and void.

The Cabinet decided to implement an EIA system not by a mandatory law but under administrative guidance. In August 1984, a Cabinet decision titled "On the Implementation of Environmental Impact Assessment" was issued, which set a uniform rule for large-scale development projects in which the national government would be involved.

In addition to EIAs conducted under the 1984 Cabinet Guideline, EIAs have been carried out under individual laws such as the Public Water Area Reclamation Law, or administrative guidelines such as Ministry of International Trade and Industry's guidelines on EIA of power plants construction. Besides, 51 main local governments out of 59 maintain their own EIA ordinances or guidelines.

II RECENT DEVELOPMENTS

The 1993 Basic Environment Law gave motivation to reconsider the existing EIA systems. The Law has an article on environmental impact assessment, obligating the National government to take necessary measures to ensure that those planning developing projects which may have severe adverse effects on the environment, conduct in advance surveys, predictions or evaluation of the environmental impacts of such projects and give proper consideration for environmental conservation based on the results of them. The Environment Agency established an ad-hoc research body, the Environmental Impact Assessment Systems Study Commission in July 1995. The Commission published a report in June 1996 after examining EIA systems in Japan and abroad. The report pointed out many EIA issues that need to be addressed and urged the National government to reconsider current EIA system under the 1984 Cabinet decision.

On 28 June 1996, just after the Commission report was published, the Prime Minister Hashimoto asked the Central Environmental Council, the official consulting body for national environmental policy, to submit him a report on desirable national EIA systems in Japan. The council held national (3 times) and regional (6 times) public hearings, and asked public opinions via mail, facsimile and e-mail. More than five hundred people responded.

In September 1996, "EIA Systems for the 21st Century", an international symposium, was held in Tokyo. The event was sponsored by the Environment Agency under the joint auspices of IAIA. With the aim of facilitating discussion at the council and furthering understanding in Japan of the significance and world trends of EIA. Environment Agency Japan invited six experts from overseas, including Mr. Pierre Sénécal (IAIA President) and four IAIA members to attend and participate in the symposium. The symposium gave precious insight and information to the council.

The council report pointed out basic lines of the new bill was handed to the Prime Minister Hashimoto on February 10, 1997.

III ACTIVITIES UNDERTAKEN

The Government submitted a bill on the Environmental Impact Assessment Law to the National Diet on 28 March 1997.

The bill adopts a listing method by scale to identify projects for which environmental impact statement (EIS) is required. The proponent of a project exceeding a certain scale designated by an ordinance under the law (Class 1 projects) shall be required to prepare an EIS without any screening process. A project with a scale smaller than the threshold for Class 1 projects but larger than a certain scale also designated by the ordinance (Class 2 projects) will be presented to a screening process where the competent authorities determine the necessity of EIS for such a project. (See Appendix 1)

The bill also introduces a scoping process with public involvement. A proponent shall be required to prepare a document describing how the proponent will conduct surveys, predictions or evaluation of the environmental impacts of the project, and make it public to seek opinions from local governments or people interested in environmental conservation.

After preparing a draft EIS, the proponent shall make it public again. The local governments concerned and anyone who is interested in environmental conservation can express their opinions. A final EIS shall be transmitted to the competent authorities for consideration for a licensing process. The Environment Agency can express its opinions on the final EIS to the competent authorities. The competent authorities can require the proponent to revise the final EIS, if necessary. (See Appendix 2)

The bill will pass the Diet in June 1997, and will entry force in June 1999, while the scoping process will start in June 1998. Ordinances on project categories and Basic Technical Guidelines will be issued in December 1997.

IV ISSUES OF PRACTICE

The Environmental Impact Assessment Systems Study Commission pointed out various EIA issues to be encountered by the national government, main ones are:

1) late timing of EIA (necessity of environmental consideration at early stages of project development),
2) little chance for public participation (only inhabitants living in designated area can express their opinions),
3) weak reviewing process (the Environment Agency cannot express opinions unless the competent authorities seek its opinion).

The 1997 EIA bill is to improve Japanese EIA system in many aspects by:

1) introducing scoping processes with public participation,
2) introducing screening processes for designated medium-sized projects,
3) enlarging the chance of public participation (anybody interested in environmental conservation can express opinions twice, in scoping process and DEIS review process),
4) ensuring transparency of the review process (the Environment Agency can express opinions on all projects),
5) including voluntary follow-up system, and so on.

V FUTURE DIRECTIONS

Through various discussions on EIA systems, the necessity of strategic environment assessment or planning is getting recognized in Japan. The Environment Agency will start new research projects on SEA.

EIA systems are basically a "reaction process". Proponent has initiative to start the process. When proponent decided to start the process, internal decision-making by the proponent had already finished, even if the contents of the decision-making will be reconsidered in the EIA process. I think we need to encourage efforts establishing local environmental planning with public participation as a "pre-action process" in order to identify local environmental value and to give enough environmental information to possible proponent. Combining the pre-action process (local environmental planning) and the reaction process (EIA) will help to reduce environmental conflicts.

VI CONCLUSION

With the 1997 EIA Law, it is expected that better consideration on the environment will be given in decision-making process in Japan than under current EIA procedures. I would like to express our thankfulness for IAIA for helping us introduce a brand-new EIA system.

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APPENDIX 1:
PROJECT CATEGORIES TO BE COVERED BY THE 1997 EIA BILL

1. road construction
2. dam and other river construction
3. construction of railway
4. construction of airport
5. construction of power plant
6. reclamation
7. waste disposal site
8. land readjustment
9. development of industrial complex
10. development of new urban residential area
11. urban infrastructure development
12. development of distribution complex
13. any project equivalent to those of 1 to 12

Class 1 project (project to be prepared an EIS without screening process)

Class 2 project (project to be decided necessity of an EIS by screening process)

EIA IN THE NETHERLANDS: THE PARADOX OF SUCCESSFUL APPLICATION AND MEDIOCRE REPUTATION[1]

Jules Scholten
Secretary General
Commission For Environmental Impact Assessment

[1] Paper prepared by Jules Scholten, Commission for EIA in the Netherlands for the IAIA pre-conference workshop on May 27, 1997 in New Orleans. USA on current key issues and challenges facing the practice of EIA.

THE EIA SYSTEM IN THE NETHERLANDS

EIA was introduced formally in the Netherlands in 1987. Since then, more than 800 decision-making procedures were started with EIA and several hundred decisions were made with the support of EIA. The Dutch EIA process is characterized by the following provisions:

- basement of the EIA process on clear legal provisions comprising statutory specifications on each of the following controls and safeguards;
- definition of what constitutes the "environment" in conducting the EIA process;
- clarity about the role of the stakeholders in the EIA process (i.e. proponent, decision-makers, the public and concerned non-governmental organizations (NGOs), expert advisors);
- clarity about which decisions for which plans and actions should be subjected to the application of EIA (screening). This also includes clarity about any application for exemption from the obligation to carry out EIA in order to avoid possible misuse of an exemption clause;
- certain "strategic" decisions, i.e. policies, plans, programmes as well as selection of sites for activities and routing decisions, are also subjected to the obligation to carry out EIA (SEA);
- scoping of the activity with the objective to produce action-specific guidelines for environmental impact statements (EISs);
- requirement to develop and describe reasonable alternative solutions to the proposed action or plan, including alternatives which are friendly to the environment through prevention, mitigation and compensation of adverse impacts on the environment;
- requirements to describe all environmental impacts which may occur and may have a significant bearing on the decision-making;
- public consultation during the stages of scoping and of review of the EIA-information prior to decision-making;
- public review of the EIA information (EIS) concentrating on the question of sufficiency of the environmental information for the decision-making;
- requirements to substantiate in the decision's record the way environmental concerns and impacts raised during the EIA-process, have been considered and taken into account in the decision (environmental acceptability);

- monitoring and post-decision evaluation of the implementation and operation of the activity.

EVALUATION OF THE ADDED VALUED OF THE DUTCH EIA SYSTEM

The *Environmental Management Act* prescribes that the legal provisions for EIA are evaluated and revised quinquennially. Hence, in 1996, the second evaluation was started and a survey was carried out about the influence of EIA to test the assumption that EIA is actually affecting decisions in the Netherlands. In that survey, questionnaires were sent to all stakeholders in a representative selection of about 100 EIA procedures that were concluded with a decision. The results showed that in 79 per cent of the cases, the respondents amongst the competent authorities and proponents agreed that EIA had produced a change of view (new relevant information) in relation to the activity, resulting in 52 percent of the cases in a direct effect, in the form of a changed proposal (additional mitigation or compensation measures or an alternative solution that is more friendly tot he environment, even including cancellation of the proposed activity(. The survey also showed that in 71 per cent of the cases, EIA led to a more receptive attitude towards environmental issues which may bear fruit in future (indirect effect, such as influence in the long run on environmental attitudes, improvement of regulations, incentive to structural research and streamlining procedures).

Lastly, in about 70 percent of the cases, the respondents amongst competent authorities and proponents considered that the application of EIA had a positive net effect outweighing the extra time and resources spent on carrying out the EIA.

The results of the survey were even more positive than many would have expected. They clearly confirmed that EIA has considerable added value, both directly and indirectly in a majority of cases.

THE PARADOX OF EIA

In spite of the positive outcome of the survey, there are many elected national, provincial and municipal politicians who claims that EIA takes too much time and is too expensive, while the information its produces is not sufficiently tailored to the decision. Such statements can be heard so often, that delays in decision-making are often ascribed to EIA, without clear evidence that EIA is the culprit. In February 1995, when excessive rainfall in the catchments of the rivers Rhine and Meuse led to alarmingly high water levels in the floodplains of these rivers threatening to overflow its embankments, many politicians were quick to blame EIA for the near-disaster. In their opinion, for many years, EIA had delayed the necessary decision that should have been taken about strengthening the embankments. The accusations turned out false as the obligation to carry out EIA for decisions concerning strengthening river embankments only came into force in September 1994, thus shortly before the near-disaster.

This example shows that EIA can suffer from preconceived opinions resulting in a mediocre reputation in spite of the hard facts of good results.

There seems to be only one explanation for this paradox. In practice, there is an important difference between the openness and rationality that EIA regards as a prerequisite and the internal informality with which some elected politicians like to take their decisions according to preconceived views.

EIA starts by scoping the possible solutions that can be found for a well-defined problem during this process; the most relevant solution are selected and compared using verifiable, generally accepted criteria. Finally, the best solution is chosen. The whole procedure is open and all democratic safeguards and controls are applied. In political decision-making, it appears that alternative solutions are often considered up to the point when a more or less satisfactory solution can be identified. Informal negotiations seem to play an important part. Sometimes, viewpoints are adopted early on: these views are then justified by argument afterwards. In these situations, decision-makers may indeed regard EIA as a time- and money consuming obligation which has to be met before the plan or action can be put into effect.

QUESTIONS FOR THE WORKSHOP

- Does the paradox described above also occur in other jurisdictions? If so, to which extent?

- Is the explanation for the paradox presented above plausible? Are there any other reasonable explanations in the light of possible experiences in other jurisdictions?

- What can be done to overcome the paradox and to improve the reputation of EIA with decision-makers? Although good quality of the various EIA products (scoping documents, EISs, review reports, etc.) is a prerequisite, it seems that good quality on its own is unable to solve the paradox. What else is needed?

EIA DEVELOPMENTS IN THE NETHERLANDS

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INTRODUCTION

The EIA-system in the Netherlands recently has been evaluated for the second time. In May 1996, the Evaluation Commission for the Environmental Management Act published their report with the second review of the EIA-system. The commission concludes that EIA in the Netherlands functions reasonably well as a means of supporting decision-making. Research shows that the EIA has in 79% of the cases results (in a broad sense) in the decision-making.

This result is more positive than many would have expected. Particularly among decision-makers, it is sometimes stated that EIA takes too much time and is too expensive, while the information it produces is not sufficiently tailored to the needs of the decision-maker. Our main short-term objective is with the EIA-practitioners to narrow the gap between the positive research facts and negative feelings around EIA in the Netherlands.

THE EVALUATION OF EIA-SYSTEM

The Evaluation Commission has formulated, based on their studies, seven recommendations for consideration by the government:

- The existing EIA-procedure should be incorporated into the licensing procedure under the Environmental Protection Act.
- The list of obligatory EIAs should be revised and changed as much as possible in a case by case screening.
- The Commission for EIA should advise in the screening on the need to carry out an EIA.
- Experiments in the use of EIA-procedure should be promoted.
- The Commission for EIA should be used more as a "knowledge bank".
- An EIA procedure should start at an early stage.
- The provision which requires a post-project analysis (monitoring), should be amended to make its application more selective.

These recommendations are at the moment discussed with the EIA-practitioners (provinces, municipalities and Commission for the EIA). The government will respond in July 1997 to the report and the recommendations.

EIA PRACTICE AND EXPERIENCES

Last year three groups of EIA-practitioners have been working with the ministry to develop answers to the recommendations of the Evaluation Commission and to their own problems with the application of EIA in the Netherlands. The first group has reviewed the list of activities with obligatory EIA and the list for screening, taking into account the experiences with EIA, the policy developments and the requirements of the European directive. The second group has studied the application of EIA in the land use planning and developed proposals for a better application.

And the third group has spent its time on EIA and the environmental licensing procedures under the Environmental Protection Act.

The results of the three groups can be summarized in the keywords: selectivity, flexibility and procedural streamlining.

SELECTIVITY

The application of EIA depends to a certain amount whether the practitioners (and not only the legislation) find it useful, tailored to their needs and efficient.

The cases should have potentially significant environmental impacts to make the application of EIA useful.

After the introduction of EIA in the Netherlands and the experiences gained during the first ten years of application, the practitioners see possibilities to be more selective in the cases where you need EIA. Policy developments and higher environmental standards already limit impacts of activities. The trend is now more directed to case by case screening whether an EIA is required (with the use of thresholds to exclude cases from screening at all). This change will probably affect the number of obligatory EIA with minus 10 to 20%. At the same time the number of screening will grow rapidly.

The second use of selectivity has to do with the scoping. Scoping for project specific content guidelines is obligatory in the Netherlands. All practitioners see it as the best way to direct the impacts studies to the main environmental issues around a project. Better scoping is required to limit the time and costs of EIA. And more important to get less detailed EIAs centered around the main issues for the decision.

The 're-use' of earlier impact statements will also help to make the application more efficient together with a better possibility to grant an exemption when all the relevant impacts are already studied in another EIA.

This selectivity, in screening and scoping, requires more information and better, advanced training for the practitioners.

FLEXIBILITY

Flexibility has mainly to do with the formal EIA-procedure. During the last decade a certain practice has been developed which can be characterized as rigid: it is always the same way of doing EIA. And the practitioners experience this as not efficient.

The built-in flexibility seems not to be known. More differentiation is possible but asks for examples, experiments and knowledge. Also earlier material from older EIAs, where possible, should be used.

In land use planning the need for a flexible application is maybe greater than in other processes. All the actors in an EIA-procedure have their opportunities for flexibility. Whether they use the opportunity depend also on the others. More (advanced) training will help to develop this flexibility.

The practitioners have also concluded that changes in the formal regulations are at the moment not necessary.

The recommendation of the Evaluation Commission for a selective post project analysis will also add to the flexibility of the system, more adaptability to the needs of the competent authority and the case itself.

PROCEDURAL STREAMLINING

One of the recommendations of the Evaluation Commission is to incorporate the existing EIA-procedure into the licensing procedure under the Environmental Protection Act in a different way than the existing. The Evaluation Commission did this recommendation to make the procedure more efficient. This recommendation is not followed by the practitioners who expected that the proposal would result in the loss of the value of EIA. Instead of this they developed a proposal to make the EIA-procedure more efficient in another manner: publish documents together like the EIS, the license application and the draft decision. The relation between the information in the EIS and the license application can also be improved.

CONCLUSION

The contrast between the findings of the Evaluation Commission in terms of results in the decision making and the negative feelings among users of EIA was the incentive to start a discussion with the practitioners to develop answers on the recommendations and the concerns in the field.

The objective is to keep EIA a quality instrument in environmental decision making. We hope to narrow this gap with the activities as described above. Keywords will be: selectivity, flexibility and procedural streamlining.

QUESTIONS FOR THE PRE-CONFERENCE WORKSHOP ON MAY 27, 1997:

1. Do you have experiences with advanced training that *may be* useful for us in developing a training program?

2. Who has experiences with the re-use of earlier ElAs (or parts of it) and what were the benefits of it?

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UK PERSPECTIVE IN EUROPEAN DIRECTIVE 97/11/EC

DECISIONS ON WHETHER ANNEX II PROJECTS REQUIRE ENVIRONMENTAL ASSESSMENT

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THE EFFECT OF DIRECTIVE 97/11/EC

- Increases the number of projects which may require EA.
- Clarifies the way in which Member States may determine whether Annex II projects require EA, by using:

  a) thresholds or criteria;
  b) a case-by-case assessment; or
  c) a combination of a) and b).

Whichever approach is adopted, it must take account of the criteria in Annex III.

- Must publicise the decision as to whether EA is required or not.

THE CURRENT UK APPROACH

UK currently uses a case-by-case approach to determine the need for EA. The Department of the Environment has published guidance for developers and planning authorities which includes criteria which apply to all categories of project, and *indicative* thresholds for some individual categories. An example is below:

> *"Industrial estate developments may require EA where:*
>
> *(i) the site area of the estate is in excess of 20 ha; or*
>
> *(ii) there are significant numbers of dwellings in close proximity to the site of the proposed estate, e.g. More than 1,000 dwellings within 200 meters of the site boundaries.*
>
> *Smaller estates might exceptionally require EA in sensitive urban or rural areas, particularly if associated with other works which are listed in Annex II".*

The UK approach has generally worked effectively:

⇒ flexible and responsive
⇒ many practitioners find indicative thresholds very helpful
⇒ give a reasonable basis on which to start the evaluation process.

but,

* danger that indicative thresholds can be treated as hard and fast rules.

CAN THE UK SYSTEM BE IMPROVED?

The implementation of Directive 97/11/EC provides an opportunity to consider the options for modifying the current system. In particular, it is important to minimize the burden on both businesses and local authorities wherever possible, while maintaining a high level of protection for the environment.

ALTERNATIVE APPROACHES

To meet the requirements of the Directive 97/11/EC, a number of other approaches might be adopted:

a) Case-by-case consideration of every project
   - ⇒ flexible and responsive to widely-differing projects and circumstances.
   - ⇒ allows officers to exercise judgment.

   - * heavy administrative burden.
   - * difficult to ensure consistent decision-making across the country.
   - * creates uncertainty.

b) Thresholds above which EA is required ('inclusive' thresholds)
   - ⇒ firm basis for developers and planning authorities.
   - ⇒ clear if an assessment was needed.

   - * goes against the principle of the Directive: Annex I sets thresholds above which EA is always required so it is implicit that there are no such thresholds for Annex II projects.
   - * difficult to define meaningful thresholds for every category of project.

c) Thresholds below which EA is not required ('exclusive' thresholds)
   - ⇒ firm basis for developers and planning authorities.
   - ⇒ reduces administrative burden.
   - ⇒ administrative resources can be concentrated on more significant projects.
   - ⇒ reduces the burden on small businesses.

   - * difficult to establish robust thresholds for every project category.

UK AIM

To combine the strengths of the case-by-case and threshold approaches to achieve a flexible system which:

a) ensures that all projects covered by Annex II of the Directive and likely to have significant effects on the environment are subject to EA.

b) simplifies the process of excluding those projects for which EA is clearly not required.

This means striking a balance between simplicity, objectivity and environmental protection objectives.

A POSSIBLE UK APPROACH

The Government's preferred approach is to build on the existing system through a combination of options b) and c):

- introduce 'exclusive' thresholds for every category of project. Projects below the thresholds will not require EA. The thresholds will need to take account not just of the scale of any development but also the sensitivity of its location and the other criteria (e.g. cumulative effects) in Annex III.

- projects above these thresholds would continue to be subject to a case-by-case consideration, supported by indicative thresholds. These would need to be reinforced to take greater account of the criteria set out in the new Annex III.

Important that thresholds are clear, consistent, robust and appropriate.

Oxford Brookes' research provides the basis for developing such a system. Thresholds based on existing practice and guidance from a wide range of UK sources.

HOW WOULD THIS WORK IN PRACTICE?

Developers and planning officers could adopt a step-by-step approach:

Step 1: **Is the project in, or would it affect, a 'sensitive' area?**

For any development proposal, the more environmentally sensitive the location, the more likely it is that the environmental effects will be significant and will warrant EA. Annex III of Directive 97/11/EC includes a list of areas which are considered to be 'sensitive', including special protection areas, nature reserves and coastal zones.

Not all Annex II projects affecting sensitive areas will require EA but it cannot be assumed that a project (no matter how small) will definitely not have significant environmental effects. In each case, it will be necessary to judge the likely significance of the environmental effects in the particular location proposed for the project (Step 3).

Step 2: **Is it below the 'exclusive' thresholds for the type of project?**

For projects outside 'sensitive' areas, a project which meets all the criteria would never be likely to have significant effects and so would never require EA. These thresholds will be set in regulations so the planning authority would not need to consider, or publicize a decision on, the need for EA.

Step 3: **Is it likely to have significant effects on the environment?**

If the project cannot be ruled out by the exclusive thresholds (i.e. it is in a 'sensitive' area or does not meet one of the criteria), it is possible that it could have significant environmental effects.

An assessment would be needed as to the need or not for EA on a case-by-case basis, supported by Government guidance.

ISSUES TO BE RESOLVED

- How to make the 'exclusive' thresholds comprehensive enough to ensure that no project likely to have significant environmental effects could be carried out without an EA?
- How to take account of cumulative effects in setting the exclusive thresholds?
- How to take account of the fact that the scale of projects likely to have significant effects can vary by country ore even region? For example, extraction of 10 ha of peat would probably not have a significant effect in England, but might be significant in Northern Ireland where peat habitats are smaller and scarcer.
- How to ensure that the indicative thresholds are not treated as hard and fast rules?
- How to avoid project-splitting?
- (UK only) How can the competent authority publish a decision on the need or not for EA for projects which are "permitted development" 1 and so do not need consent from the competent authority to carry out the development?

ENVIRONMENTAL IMPACT ASSESSMENT ISSUES WITH SPECIFIC REFERENCE TO INDUSTRY AND DEVELOPING COUNTRIES

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ENVIRONMENTAL IMPACT ASSESSMENT

EIA has developed extensively in the past two decades and has been included formally in the legislation of a number of developing countries. Institutional recognition of EIA as a useful tool for decision making has a parallel in the regulatory system.

When applied to industrial projects in developing countries, some demands are difficult to meet because of the absence of fundamental data. As opposed to some countries where legislation is lacking, the requirements in other countries go too far which, in the case of small-and medium-sized industries, makes it impossible to comply.

Excessive requirements also introduce a problem in governmental institutions with limited capacity which are in charge of the revision and judgment of the reports, delaying industrial projects where more industrialization is needed

Some of the more important issues are briefly introduced in the following paragraphs:

HARMONIZATION OF EIA REQUIREMENTS

Regional trade treaties and economic globalization require homogenous approaches to common issues in the industrialization process. Harmonization should start at the planning stage where EIA is requested. Nevertheless, decisions on whether a proposed project has to be assessed are subject to different criteria in different countries. Sometimes the index of the content looks similar, but in practice there is no equivalency between requirements. Frequently EIA correctness depends on the capacity of the consultants. It takes time for the reviewers to acquire the necessary experience, in particular with industrial projects. Many developing countries do not have such capacity for reviewing, and they must rely on the work of consultants.

For unknown reasons, ISO has not included EIA as a part of environmental management systems. Some degree of standardization should be necessary to achieve homogeneity and to provide minimum requirements.

PROBLEMS IN DATA AVAILABILITY

To report complete EIA requires analysis of data and information on the geophysical social and environmental characteristics of the territory, many times not available, particularly in developing countries. Geographical information systems (GIS), increasingly used in industrialized countries, are not readily available in developing countries.

Authorities should favour the creation of data banks. When studies on land use planning have been done, additional information could be provided through the data banks on the capability or vulnerability of the space under consideration to support the planned

activity. Such data banks will make data available and accessible to the analysis avoiding multiplication of efforts.

A second step should be the implementation of Strategic Environmental Assessments (SEA). SEA, as a general policy and planning tool, would provide, for individual projects, critical information such as environmental vulnerability of some geographical areas and would facilitate the execution of EIA.

REQUIREMENTS FOR SMIS

Some developing countries are requesting, at least in theory, EIA for all kinds of projects, creating a problem of additional burdens and difficulties for the development of the small and medium sector of the industry.

The reason for an EIA is the potential of significant impacts on the environment, which is not the case with many SMIs. The request for EIA for all types and sizes of industries, as requested in some developing countries, is inadequate.

A first delimitation should be for the appropriate type of industries. A second one according to the size of industries, is establishing guidelines for small generators, facilitating the task of entrepreneurs. Otherwise in the preliminaries of the permitting system for industrial activities, a very simple environmental assessment containing a brief description of the project and of the potential environmental impacts, if any, should be enough to determine whether a full EIA is necessary.

When a complete EIA is required, it may occupy a multidisciplinary team of several professionals working many man hours. When the project is of medium size, a complete EIA may disproportionately increase the cost of the project. As for small generators, intermediate situations should have adjusted requirements.

National capacity building and specific courses of multidisciplinary education on how to use existing information on geology, ecology, meteorology, etc. may facilitate the use of cheaper national manpower and reduce the size of the teams.

EIA IN CHEMICAL INDUSTRIES

Chemical (and similar) industries have requests on health and safety conditions in the workplace in addition to environmental issues. Usually there is a strong connection between health and safety and environmental problems. Work place health conditions, in general, can be seen as a first indicator of more distant environmental problems.

Some of the most important environmental disasters, like Bhopal, are derived from safety issues. Human capacity, equipment design, maintenance and working conditions are relevant to both safety and environment protection.

EIA for such chemical industries should include an overview of the health and safety aspects because of the connections between the targets of both issues and the identification of the origin of many of the impacts.

SCOPE OF THE IMPACTS ASSESSED

- EIA carries out a review of the industrial projects as described in the original documents provided by the engineering company and/or the process supplier. The original project may include a number of pollution prevention measures already adopted. The EIA may find it necessary to adopt some other additional measures.

- For easy review of the assessment, the final report should include a summary of all measures with clear distinction of those included in he original project and those additionally required by the EIA.

- Many times the project has not considered - or has not explained - the site selection procedure - neither the specific process nor the basic technology selection procedure. Normally those are decided more on an economic than social or environmental basis. This reduces the scope of the analysis, forgetting these two aspects that may have a more critical impact than other specific details of the projects.

- The analysis of alternatives in site and technology selection should be included in the EIA.

FOLLOW UP OF EIA

Sometimes the EIA does include the list of improvements required in the project but does not require checking or verification of the implementation of the specified improvements. Frequently EIAs do not include requirements for life cycle control of the environmental conditions. A chapter of the EIA has to include instructions for determining if the questions addressed have really been implemented, both during the construction of the facilities and during the operation of the facilities.

Guidelines included in the EIA for environmentally sustainable operation should be a reference for future audits of the manufacturing system.

NEW INSTRUMENTS FOR EIA

New instruments of assessment are being introduced in the preparation of EIA. Some, like assessment, may introduce new complexities. Others, like expert systems, may contribute to homogenizing the assessment if a standard is first adopted for different kinds of projects - for example, roads, airports, forestry, chemical industry.

Developing countries should obtain increased assistance to adopt such improvements in their national agenda.

STATUS AND PROGRESS OF EIA IN THE UNITED STATES OF AMERICA

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BACKGROUND

The National Environmental Policy Act (NEPA) [42 U.S.C. 4321 et seq.] was signed into law on January 1, 1970. The Act establishes national environmental policy and goals for the protection, maintenance, and enhancement of the environment and it provides a process for implementing these goals within the federal agencies. The Act also establishes the Council on Environmental Quality (CEQ). In 1972, the Clean Air Act was amended to add a provision that requires the Environmental Protection Agency (EPA) to provide an independent review of certain federal actions including EISs comment in writing, make such continents available to the public, and refer to CEQ projects that the Administrator of EPA determines to be unsatisfactory from the standpoint of public health or welfare or environmental quality.

In 1978 after a series of nonbinding guidelines, CEQ issued regulations [40 CFR Parts 1500-1508] implementing NEPA *which* are binding on all federal agencies. The regulations address the procedural provisions of NEPA and the administration of the NEPA process, including preparation of environmental impact statements (EISs). To date, the only change in the NEPA regulations occurred on May 27, 1986, when CEQ amended Section 1502.22 of its regulations to clarify how agencies are to carry out their environmental evaluations in situations where information is incomplete or unavailable

CEQ has also issued guidance on various aspects of the regulations including; an information document on "*Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act*", *Scoping Guidance*, and *Guidance Regarding NEPA Regulations*. Additionally, most federal agencies have promulgated their own NEPA regulations and guidance, which generally follow the CEQ procedures but are tailored for the specific mission and activities of the agency.

NEPA applies to federal actions -- direct federal actions, licences/permits, and financial assistance it does not apply to actions that do not have federal involvement. Over twenty states and some cities have enacted their own environmental impact assessment requirements. NEPA applies to projects, programs, and plans although most of the activity has centered on projects. It ensures an analysis of direct, indirect and cumulative impacts; an analysis of reasonable alternatives; and involvement of the public in the evaluation.

Independent technical review of EISs is required of EPA by Section 309 of the Clean Air Act and extends to all potential impacts relating to EPA's duties and responsibilities.

RECENT DEVELOPMENTS

Environmental Justice

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" requires that "each Federal agency make

achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health and environmental effects of its programs, policies, and activities on minority populations and low-income populations." In the memorandum to heads of department and agencies that accompanied Executive Order 12898, the President specifically recognized the importance of procedures under NEPA for identifying and addressing environmental justice concerns. The memorandum directs each Federal agency to analyze "...the environmental effects, including human health, economic and social effects of federal actions, including effects on minority communities and low-income communities, when such analysis is required by [NEPA]." It also directs EPA to use its Section 309 authorities to ensure that involved agencies have fully analyzed environmental effects on minority communities and low-income communities. The memorandum particularly emphasizes the importance of NEPA's comprehensive public participation, directing that "each Federal agency shall provide opportunities for community input in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of meetings, crucial documents and notices."

CEQ has implemented draft guidance to all agencies on implementing Executive Order 12898, and the EPA has issued draft guidance (1) for implementing the Executive Order in its own NEPA compliance documents and (2) for reviewing other federal agencies' EISs for compliance with the Executive Order, as directed by the Presidential Memorandum. Several other federal agencies are also in the process of developing agency-specific guidance.

EIA Procedures for Antarctica

The Antarctic Science, Tourism, and Conservation Act of 1996 required EPA to issue regulations that will provide for: (l) environmental impact assessment of nongovernmental activities, including tourism, in Antarctica for which the United States is required to give advance notice under paragraph 5 of Article VII of The Antarctic Treaty of 1996 and (2) coordination of the review of information regarding environmental impact assessments received by the United States from other Parties to the Protocol on Environmental Protection to the Antarctic Treaty. EPA has published interim regulations that apply to nongovernmental activities conducted in Antarctica through the 1998-1999 summer, the interim regulations will be replaced by a Final Rule, which is expected to be issued in January 1998. EPA is currently preparing an EIS to consider the environmental and regulatory issues to be addressed in the Final Rule and the alternatives for addressing these issues within the rulemaking process.

ACTIVITIES UNDERTAKEN

In calendar year 1996 there were a total of 576 EISs published in the U.S, of which 241 were draft EISs. The remainder were either supplemental draft, supplemental final, or final EISs. This is an increase over a low in 1989 of 370 EISs, 167 of which were draft. It is believed that there were upwards of 50,000 environmental assessments (EAs) published

in 1996. This is an estimate since, unlike EISs, EAs are not centrally filed at and tracked by EPA. The Forest Service issues the highest number of EISs, followed by the Federal Highway Administration

Cumulative Impacts

CEQ issued *Considering Cumulative Effects Under The National Environmental Policy* Act in January 1997. This document introduces the NEPA practitioner and other interested parties to the complex issue of cumulative effects, outlines general principles, presents useful steps, and provides information on methods of cumulative effects analysis and data sources. This handbook was developed by reviewing the literature and interviewing practitioners of environmental impact assessment. Most agencies that have developed their own guidelines for analyzing cumulative effects recognize cumulative effects analysis as an integral part of the NEPA process, not a separate effort. This handbook is not formal guidance; it does not establish new requirements for such analyses. It should assist practitioners in developing their own study-specific approaches. CEQ expects that the handbook (and similar agency guidelines) will be updated periodically to reflect additional experience and new methods. In addition, EPA is currently developing EIS reviewer guidance for the review of cumulative impact assessments in EISs.

NEPA Effectiveness Study

In January 1997 CEQ issued *The National Environmental Policy Act -- A Study of its Effectiveness After Twenty-five Years.* Organizations and individuals who are knowledgeable and experienced in the application of NEPA, both NEPA advocates and critics, participated in the study. In addition to soliciting input from some of the original framers of NEPA, Members of Congress, state and local agencies, native American tribes, those who drafted the CEQ regulations, and federal agencies with experience implementing the Act, CEQ made a major effort to include the opinions of the public -- academicians, non-governmental organizations, citizens, and businesses. Overall, the study found that NEPA is a success -- it has made agencies take a hard look at the potential environmental consequences of their actions and it has brought the public into the agency decision-making process like no other statute. The study participants felt that NEPA's most enduring legacy is as a framework for collaboration between federal agencies and those who will bear the environmental, social, and economic impacts of agency decisions. However, study participants also stated that frequently NEPA takes too long and costs too much, agencies make decisions before hearing from the public, documents are too long and technical for many people to use, and training for agency officials at times is inadequate. The participants in the NEPA Effectiveness Study identified five elements of the NEPA process that are critical to its effective and efficient implementation: strategic planning, public information and input, interagency coordination, an interdisciplinary place-based approach to decision-making, and science-based and flexible management approaches,

ISSUES OF PRACTICE

Ecosystem Assessment and Management

Federal agencies, especially the land management agencies, are approaching decision-making with an eye to the overall ecological framework for their decisions. The President's Northwest Forest Plan initiated this effort by looking at federal lands under the control of both the United States Department of Agriculture's Forest Service and the Department of Interior's Bureau of Land Management in the range of the northern spotted owl, and how timber resources can be managed for use and consumption on a sustainable basis for both timber supply and the species (terrestrial and aquatic) that depend upon these ecosystems. The EIS for this project was not constrained by administrative or political boundaries, but rather was based on ecosystem considerations.

An even larger area - the Interior Columbia River Basin -- is now undergoing a similar review through the Interior Columbia Basin Ecosystem Management Project. Two draft EISs - Eastside and Upper Columbia River -- have been developed for an area of 144 million acres, of which approximately 72 million acres are under the jurisdiction of either the Forest Service or the Bureau of Land Management. The documents, and the scientific assessment upon which they are based, describe the opportunities and risks in sustaining healthy ecosystems and providing goods and services for people, They also provide a better understanding of long term cumulative effects. This basin-wide perspective will allow land management agencies to develop strategies and set priorities for activities among various administrative units to resolve forest, rangeland, and riparian health problems as well as support the needs of people.

To assist EIS reviewers, EPA has issued EIS reviewer guidance to assist with ecosystem impacts: *Habitat Evaluation: Guidance for the Review of Environmental impact Assessment Documents* (1993); *Background* NEPA *Reviewers: Grazing on Federal* Lands (1994); and, *Evaluation of Ecological Impacts from Highway Development* (1994). EPA is currently developing EIS reviewer guidance that will address *Ecological Considerations for NEPA Documents Preparation and Review* (working title).

FUTURE DIRECTIONS

NEPA Reinvention.

CEQ and the federal agencies which comply with NEPA are developing a strategy to streamline NEPA implementation. Goals include improving interagency coordination and responsiveness, making the process more efficient, and enhancing environmental decision making.

Initial efforts have been focused on three sectors: timber, grazing, and oil and gas development. Interagency workgroups have submitted draft proposals of recommended changes to CEQ. As this process continues, the agencies are making internal changes to improve consistency and to increase training opportunities.

Internet Developments

Use of the World Wide Web as a means of improving public access to NEPA-related documents continues to improve and expand. CEQ has created "NEPAnet" (http//ceq.eh.doe.gov/nepa/nepanet.htm), which provides instant access to an expansive range of online NEPA information, including CEQ regulations, guidance and annual reports, EPA filings and ratings, bibliographic and training information, spatial data systems, and international environmental disasters. EPA's Office of Federal Activities has also developed a Web site (http://es.inel.gov/oeca/ofa/index.html) focusing on NEPA-related issues. EPA's Web site currently publishes, on a weekly basis, notice of all EISs currently available for comment, as well as summaries of EPA's comments on EISs. Future plans for EPA's Web site include providing users with the ability to execute their own custom-defined searches of EPA's EIS database of filed EISs and EPA comments on EISs. Other agencies have created Web sites; some agencies (e.g., the Department of Energy) are also posting electronic copies of EISs for review (http://tis-nt.eh.doe.gov/nepa/).

CONCLUSION

Environmental impact assessment has, been successful in the United States in changing the way federal agencies develop projects and, increasingly, how they develop plans and programs. It is hard to document a negative, but it is clear that the environment has benefited from the process. Interagency cooperation and collaboration are critical to more efficient planning and further streamlining. A major challenge will be how to continue and expand the practice of environmental impact assessment while streamlining the process and conserving financial resources. Environmental review capacities are also being strained by decreasing personnel resources and an expanding universe of opportunities, especially opportunities to get involved in project development at an early stage. However, it is clear that the earlier in the process the environmental reviewer can get involved, the more successful the reviewer will be, improving the quality of both the environmental documentation and the project itself. Finally, public participation and involvement remain a critical element of the EIA process, and are especially vital if the process is to be utilized to ensure that minority communities and low-income communities are not disproportionately subjected to adverse public health and environmental impacts.

PART III

PROPOSALS AND INITIATIVES FOR INTERNATIONAL COOPERATION

INTERNATIONAL EIA NETWORK

Draft Proposal

Prepared by
Environment Protection Group
Environment Australia

On behalf of
International Study of the Effectiveness of
Environmental Assessment

BACKGROUND

In December 1995 as part of its contribution to the International Study of the Effectiveness of EA, the Canadian Environmental Assessment Agency (CEAA) circulated a proposal titled *Towards an Environmental Assessment Network.*

The proposal outlined the need for, and benefit of, an electronic EIA network and defined the challenge for such a network as being 'to meet the needs of EA managers and practitioners for convenient, cost-effective access to current and emerging information and knowledge so that they may administer and apply EA more effectively and efficiently. In this way, EA will become a more responsive decision-making tool in support of sustainable development - whether in developed, developing or transitional economies'[1].

Countries around the world are now recognising the enormous potential of the Internet for information collection and dissemination and are integrating this new technology into everyday professional practice.

This proposal seeks to progress development of an Internet-based International EIA Network as a continuation of the International Study of the Effectiveness of EA program.

AIMS

The broad aims of the Network will be to:

- provide practitioners world-wide with easy access to timely information on national and international EIA;
- to open the channels of communication within and between countries;
- raise the quality and awareness of EIA practice and procedures; and
- support capacity building in the various regions.

OBJECTIVES

- Facilitate the exchange of ideas and information between practitioners.
- Establish systematic collation of available significant EIA documents.

[1] Shillington, T. and LeBlanc, P. "Towards an Environmental Assessment Network", Canadian Environmental Assessment Agency/International Study of the Effectiveness of Environmental Assessment, December 1995: p5

- Raise the quality of government EIA leading to a corresponding improvement in consultant-prepared EISs.
- Address the needs of national governments in training EIA operators.
- Promote coordination among practitioners on new initiatives and projects of common interest.
- Through message boards and information components, encourage participation in various activities and workshops.
- Advance the collection of case studies.

These aims and objectives can be achieved utilising the Internet - an innovative technological, yet practical and cost-effective tool to facilitate information sharing.

STRUCTURE

It is envisaged that there will be three interlinked levels to the Network.

The International EIA Network

This level will represent the umbrella for the proposal. It will consist of a home page linking to all participating country sites (grouped by region) and contain, or link to, other relevant, central information (such as a description of the Network idea, progress reports and so on). It will provide a focus for the Network which will be important for users and for participating sites as a 'one-stop' links reference.

The Regional EIA Network

The world will be divided into the following regions to be reflected in the design of the home page:

- Africa
- Americas
- Asia-Pacific
- Europe
- North Africa & West Asia

Participating countries will be organised into these regions. Each region will have a designated **Regional Network Manager** (RNM) to coordinate regional participation in the proposal, and in collaboration with Country Network Managers (see Level 3 below),

initiate and drive cooperative projects, pilot innovations and facilitate discussion of issues transboundary in nature through the electronic Network. Information on, and generated by, Regional Networks will be available on dedicated regional pages linked through the home page.

The Country EIA Network

Each participating country will designate a Country Network Manager (CNM). This will be the person in charge of the construction and development of the national EIA Network and be the main Internet contact for EIA in that country (ea. Australian EIA Network Manager).

IMPLEMENTATION

Implementation can be divided into three distinct phases.

PHASE 1 - Establishment of the Home Page

Target: Completion of International EIA Network level

Facilitator: Environment Australia

- Environment Australia has an existing agreement with the International Study of the Effectiveness of EA (the Study) to place and support through its Australian EIA Network the products of the Study.

- On behalf of the Study, Environment Australia will design, develop and maintain the International EIA Network home page.

PHASE 2 - Establishment of Links to Existing Electronic Sites

Target: Partial Completion of Regional and Country EIA Network levels

Facilitator: Environment Australia

The aim of this phase is threefold.

1. Create regional network pages linking to the home page.

2. Create links to existing EIA Internet sites (e.g. Australian EIA Network, CEAA) from the Network home page, grouped by region; and

Contact countries with existing Internet sites via electronic mail to negotiate and encourage placement of key EIA information on the Internet and identify relevant country contacts (ea. Indonesia, Singapore, US, UK).

Environment Australia will facilitate this phase in cooperation with the Study, key EIA contacts and relevant Network Managers/Site Managers. The Study and UNEP EIA Training Resource Manual exercises have identified proactive practitioners world-wide. These contacts will be invaluable in scoping for existing sites and identifying suitable country contacts.

PHASE 3 - Establishment of Electronic Sites

Target: Completion of Regional and Country EIA Network levels

Facilitator(s): UNEP (Economics, Trade and Environment Unit) in cooperation with the Director, International Study of the Effectiveness

The aim of this phase will be to manage, facilitate, and as necessary sponsor (or organise sponsorship), set-up of EIA electronic networks in countries where there is:

- limited or no technological capacity; or
- existing technological capacity but no Internet access or suitable site.

Development

It is envisaged development of Phase 3 will involve the following steps:

- Designate RNMs (through a process of negotiation with other key practitioners/organisations). The first RNMs should ideally be EIA practitioners with suitable access to Internet facilities or Network Managers of existing EIA sites. The position should eventually be rotated, say, on an annual basis between countries within the region so all have the opportunity to coordinate the regional interest.

- RNMs will undertake an informal scope, within an agreed timeframe, to determine the capacity of countries within their region to participate in the Network and conduct a survey of available information. The facilitator(s) should provide RNMs with standard questions to enable comparison of capacity within and between regions.

- The facilitator(s) will collate this information and through a meeting of RNMs collectively or individually, face-to-face or via electronic medium, discuss possible approach and agree on a plan of action for each region (including timeframe for progress).

- RNMs will report on progress against agreed action plans to the facilitator(s) who in turn will report to the Study/Environment Australia with regular progress reports to be placed on the home page, regional pages.

- The first task for RNMs will be to designate Country Network Managers (CNMs).

- CNMs will initially conduct more detailed scoping as necessary of information holdings within their countries and work on resource lists (this list could include reports, workshop summaries and so on and would build on the previous work done by RNMs).

- CNMs will organise site set-up (with the assistance of the RNM, facilitator(s) and, as appropriate, sponsors). Once operational, the CNMs' task will be to maintain the site and develop as they deem appropriate.

Where to start?

There is no particular starting point from which to launch into Phase 3 of this proposal. Some countries will be easier to organise into the Network than others. Implementation could be approached simultaneously in the various regions, however, trialing Phase 3 in one region initially, **then** moving to simultaneous development of the remaining regions would highlight problems and solutions and produce protocols which would make expansion into other regions easier and quicker.

The aim is for countries within each region to develop and ultimately achieve capacity to maintain **in-country** autonomous, electronic network sites which link to the International EIA Network home page.

Given the differences in technological capacity, it may be necessary for the facilitator(s) of Phase 3 in consultation with the participating country to negotiate sponsorship funding for some sites (ea. through national governments, international aid organisations, bilaterals, industry and NGO groups).

Each participating country within the region must designate one officer (preferably involved in EIA rather than an IT officer) to be the CNM. This officer will manage the Internet site (either individually or in cooperation with IT staff), and use the Network initiative to assist the EIA process nationally (see **Attachment** A *Case Study: Australian EIA Network* for an example of how it is being used to facilitate public participation in the EIA process).

The CNM will ideally have full-time access to the Internet with reliable email connections. Access to international email will be of enormous importance enabling communication between participants. However, the access time required will vary depending on the level of involvement in the Network and the amount of effort put into the site (e.g. if countries choose simply to put live basic documents and peruse other sites only occasionally this will reduce significantly the necessity for unlimited access with a follow-on reduction in the costs involved).

Countries **must** have the know-how to develop their own sites and be able to put live relevant information to meet the requirements of their own practitioners. Electronic

networks are ongoing in nature and require continued national usage and support to remain effective.

There will not, and should not, be any protocol outlining the design of country sites as this is an individual expression and establishes country identity. However, presentation of consistent information (legislation, contacts, message centres) must be encouraged. Two items should remain constant:

- All sites must have a reciprocal link to the home page;
- All sites must attempt to have a base of consistent information where possible (legislation, contacts, a central email contact and, if possible, an overview of the EIA process and how it operates).

Site development could include providing local reports of interest, conference/workshop details, project details and so on and will be at the discretion of the CNM. Mail groups could be set up within regions between the RNM and all CNMs to canvass issues, highlight progress, seek assistance and so on. The RNM task should rotate between countries. say, annually.

WHAT INFORMATION WILL BE AVAILABLE?

Information can be placed in two categories:

1. Need to know
2. Want to know

Category 1
Information in this category could include EIA legislation (or similar), country contacts and ideally, a concise summary of how EIA operates in that country.

Category 2
Information in this category could include other useful material such as report references, bibliographies, country information, links to other servers and so on.

It will be the focus of the facilitators of Phases 2 and 3 to progress the "Need to Know" category of information as a priority; countries themselves must determine the "Want to Know" information content and develop as they see fit.

TIMING

At the proposed Senior EA Managers' Workshop to be held in conjunction with IAIA '97 (New Orleans):

- introduce the proposal to the international community; and

- determine whether any scoping exercise on technological capacity has previously been undertaken

Post-Workshop:

- Environment Australia will begin work on Phase 1 for completion as soon as possible, and Phase 2 for completion possibly by mid 1998.

- The agreed facilitator(s) of Phase 3 will then progress expansion of the Network in line with the proposal, providing regular reports to the Study and Environment Australia of developments.

It should be noted that the timing regarding completion of Phase 3 of the proposal is flexible. It may not be possible to prescribe stringent deadlines for completion due to the complexity of the task. Some country sites will be operational in a relatively short time, others may take longer due to circumstances outside the control of the facilitator(s).

One year from the commencement of the project (mid-1998), a comprehensive report should be presented by UNEP/the Study/Environment Australia (suggest at IAIA '98 in New Zealand) on the progress and effectiveness of the Network, how it can be improved, areas in need of support (financial or otherwise), the usage and perception of users as to its operation and relevance (possibly using an Internet questionnaire).

COSTS

Phase 1

Contributed by Environment Australia using existing network resources.

Phase 2

Contributed by Environment Australia using existing network resources with additional support from the Study and others as appropriate.

The costs associated with placing EIA information on existing sites and any subsequent page redesign will be borne by the participating countries.

Phase 3

The cost of facilitating Phase 3 of the proposal (including any necessary travel) will be contributed by UNEP or by a sponsor negotiated by that organisation.

The cost of setting up in-country Internet sites, purchase of required hardware/software, training and connection fees will be borne either by participating countries or through initial sponsorship.

Ongoing costs to participating countries (or ongoing sponsors) will focus on maintenance of the site and assisting the CNM in development.

These costs need not be prohibitive. For the relatively low outlay involved in purchasing the equipment (hardware, software, Internet access, IT set-up) and then maintaining the site (software training, ongoing server access fees as appropriate), EIA practitioners in participating countries will have access, literally, to a world of information not previously available. Furthermore, access is not limited exclusively to EIA-specific information - once practitioners have access to the World Wide Web they can use the International EIA Network as a 'springboard' to other environment related sites.

ISSUES

Some agreement will need to be reached by participating countries on the following issues.

Language

As the most widely used language on the Internet, the official language of the Network should be English. However, to ensure relevance and use of the information in-country, CNMs could provide an option on their sites for information in their native language as well as in English (e.g. CEAA site has options for English or French).

Information Technology

A major aim of the Network is to allow access to all practitioners. This means that the information technology used for the network must be cost-effective and compatible with a wide range of existing systems. Internet is the only existing technology that meets these requirements.

Security

Security of information on the Internet is comparable to that of electronic mail. Specific security needs must be identified during the initial planning stages of Networks. It is technically possible to limit access in a variety of ways, such as through passwords, specific mailing groups and so on. However, these measures significantly add to the complexity of the system with follow-on effects to the overall cost.

Another issue that has been raised is one of security of documents. Documents on the Internet are usually "read only". However, although they may not be altered on the Internet, it is possible to print or download the document. This is unavoidable.

Linkages

In an attempt to establish as far as possible compatible and consistent systems within the Network, links/cross-references between systems in addition to the links to the home page should be encouraged as a 'road map' for users (placement of such links would be at the discretion of CNMs).

Ongoing Maintenance

Ongoing, focused maintenance of the various sites that will make up the Network will be essential to its longevity. If the overall aim of the Network is to become a well-used resource for information and ideas between EIA practitioners, funding and personnel will be needed to ensure the Network retains a high standard of information and remains effective. Region and Country Network Managers will need to be proactive, enthusiastic and innovative in their approach to the Networks. Central to their success will be the support of national governments in cooperation with practitioners.

FUTURE DEVELOPMENT

We recognise that although increasingly important, electronic networks are only one component of a successful strategy to build partnerships and encourage communication within and between countries and regions.

Once operational, the electronic networks could represent a focus for regional discussion groups and open up the possibility of electronic workshops between countries on issues of concern. Such region-based groups could form 'think tanks', 'brainstorm' on issues, and foster cooperative relationships.

Electronic networks are the way of the future. This proposal seeks to encourage countries to utilise the new technology to exchange experience and innovations; to foster solid working relationships and facilitate cooperation within and between countries and regions in a way that is cost-effective and accessible to all.

Once enthusiastic and proactive RNMs and CNMs are in place, the International EIA Network will take on a life of its own. It has the potential to be innovative and dynamic. There should remain ongoing contact within and between the various regions and with the Study and home page, however, country sites will be maintained and evolve autonomously to meet the needs of national, as well as international, practitioners.

This proposal provides the structure for implementation - the possibilities for cooperation and future development are infinite and limited only by the imagination and enthusiasm of participants.

F2

GLOSSARY

The Study	International Study of the Effectiveness of EA. The ongoing work of the Study is being carried forward by a consortium of interested agencies and practitioners.
UNEP	United Nations Environment Program (Economics, Trade and Environment Unit)
CEAA	Canadian Environmental Assessment Agency
The Network	International EIA Network
RNM	Regional Network Manager
CNM	Country Network Manager

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EXPANDING ENVIRONMENTAL ASSESSMENT CAPACITY IN SUB-SAHARAN AFRICA:

ISSUES AND OPTIONS
A Discussion Paper

May, 1997

Prepared Jointly by:

The World Conservation Union (IUCN) and the World Bank

This discussion paper has been prepared as a joint initiative by IUCN (The World Conservation Union) and the World Bank. The paper discusses strategic options for expanding environmental assessment (EA) capacity in Sub-Saharan Africa (SSA). It should be viewed within two distinct contexts: (i) current efforts to advance the notion and practice of environmentally sustainable development in SSA; and (ii) efforts to expand institutional and human capacity more broadly in this region. The conclusions in this paper are not definitive; nor do the views and interpretations necessarily reflect the opinions of IUCN and any of its members or the World Bank and any of its affiliated institutions. For comments and suggestions, please contact us by e-mail at: okjorven@worldbank.org and paul_driver@mouchel.com or by fax: 1-202-477-0568

FOREWORD

The World Bank and IUCN are strongly committed to assisting countries in Sub-Saharan Africa (SSA) in strengthening their environmental management and conservation efforts. Both organizations agree that stronger and more strategic efforts are needed if current trends of environmental degradation--often with serious economic and social consequences--are to be reversed. One of the most important challenges is to build and expand institutional and human capacity for environmental management.

The World Bank is defining its medium term agenda to assist Sub-Saharan African countries in moving towards environmentally sustainable development. This process has been informed by a series of publications, including a discussion paper: *Toward Environmentally Sustainable Development in Sub-Saharan Africa--A World Bank Perspective (1995)*. In parallel, the African Governors of the Bank have prepared and issued a major report of direct relevance to this work: *Partnership for Capacity Building in Africa: Strategy and Program of Action* (1996).

IUCN is implementing a decentralization program for its activities in SSA, involving strengthening of subregional offices (largely with African professionals) and management of projects and programs at the local level. Increased collaboration with other institutions involved in environmental management and conservation efforts in SSA is a key element of this strategy.

This discussion paper, prepared jointly by IUCN and the World Bank, is a reflection of these priorities and an early output from a collaborative effort that both organizations are committed to for the longer term. Both institutions view *environmental assessment (EA)* as a critical component of sound environmental management at national and local levels. Since EA has yet to be firmly introduced in most SSA countries and capacity to manage EA processes and undertake EA studies is extremely limited (with the exception of a few countries), the purpose of this discussion paper is to initiate a broad dialogue about what might be done to gradually expand EA capacity in the continent.

The process of preparing this paper has involved extensive consultations within SSA as well as with other development assistance agencies and NGOs. It is our hope that this paper will stimulate further discussions among SSA governments, African and international NGOs, donor agencies and EA practitioners active in SSA.

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Many other people have provided major contributions, including: Shimwaayi Muntemba, public participation specialist in the Africa Environmental Group; Knut Opsal, an independent environmental consultant formerly with the World Bank and the African Development Bank; Eldad Tukahirwa, formerly Professor and Director at the Institute of Environment and Natural Resources of Makerere University, Uganda, and now IUCN's Regional Representative for Eastern Africa (Nairobi); and Miguel Fernandez, a consultant with the World Bank.

Finally, a large number of people within and outside IUCN and the Bank have provided advice, comments and suggestions along the way. The authors particularly would like to thank Colin Rees, Division Chief for the Land, Water and Natural Habitats Division at the World Bank; Cynthia Cook, head of the Africa Environmental Group at the World Bank; and Achim Steiner, Multilateral Development Bank Coordinator at IUCN's Washington office.

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INTRODUCTION

This discussion paper reviews the current status of environmental assessment (EA) capacity in Sub-Saharan Africa (SSA) and provides an overview of mechanisms and approaches that may be used to expand and enhance capacity. It also discusses how these mechanisms and approaches might be put to work in a strategic and cost-effective way.

The immediate purpose of the paper is to stimulate a broad discussion about environmental assessment (EA) capacity building in Sub-Saharan Africa (SSA). More fundamentally, it is hoped that the paper will serve as a contribution to building a broad consensus on strategic approaches to expanding EA capacity on the continent, a consensus that should involve SSA countries, development assistance agencies, and non-governmental organizations with interest and expertise in EA.

The idea of preparing a paper on this subject was first discussed with a wide range of people represented at both the High Level Conference of African Ministers in Charge of Environment (AMCEN) and the Conference of the International Association for Impact Assessment (IAIA) which were held in Durban, South Africa in June 1995. The idea received substantial support from environmental assessment specialists, policy makers, NGOs and donor agencies. Initially, the paper focused on the feasibility of encouraging subregional resource centers for EA training and capacity building. But, in response to comments, the work evolved into the consideration of several other relevant issues and resulted in a consultative dialogue involving a large number of individuals and organizations within and outside of Africa.

The paper encompasses a huge geographic area with great variations in terms of environmental, political, economic and social conditions, and institutional and regulatory capacity. There is also great variability in the information available. Consequently, the scope of the paper is limited to:

1. A discussion of the role of EA in development planning and the concept of capacity building, applied to EA (Part One);

2. a brief analysis of current EA capacity, and capacity building experience, in SSA countries and the role of main parties in this process (Part Two);

3. a discussion of mechanisms at the regional and subregional levels that may offer promise in supporting the EA capacity building efforts in SSA (Part Three) including;

    ⇒ Sub-regional and national centers supporting environmental assessment capacity building by performing education and training and providing consultancy services.

⇒ networks of individuals and organizations with an interest in the different aspects of EA; partnerships between different organizations (government agencies, international and SSA-based NGOs, private sector organizations, donor agencies, universities etc.);

4. a discussion of strategic approaches to EA capacity building at the country level, taking into account the diversity of in-country conditions and needs (Part Four); and

5. finally, broad recommendations for action (Part Five).

More general information on environmental capacity building in SSA is contained in recent World Bank papers such as *Environmental Assessment and Review in Sub-Sahara Africa* (1996) and *Institutional Structures for Sustainable Development* (1996). These discussion papers are available from the Africa Environmental Group at the World Bank. The Bank's experience with regard to environmental assessment is captured in the recently published study: *The Impact of Environmental Assessment: The World Bank's Experience*, available from the Environment Department.

PART ONE: CAPACITY BUILDING AND EA

Role and Contribution of EA in Development Planning

This paper views EA capacity building within the broader framework of environmental management. EA, which is one of the most important environmental planning and management tools available, is a process of evaluating a proposed activity in terms of its potential environmental impacts and identifying ways to improve the proposal by suggesting changes to its design or location and otherwise determine measures to prevent, minimize, mitigate or compensate for environmental impacts. EA is a requirement for projects and programs financed or cofinanced by the World Bank and by most other development assistance agencies. It is also increasingly a requirement under national and subnational laws and regulations worldwide.

Environmental assessment has applicability throughout the life of a project. However, its influence is most powerful in the early planning phases when critical choices are being made about development options, the siting of projects, the choice of control technology and other impact mitigation measures.

The process of EA uses information obtained through a wide variety of disciplines in the physical, biological and social sciences. It also uses traditional knowledge and information about community values gathered by means of several tools, including processes of public consultation. The process of EA provides an evaluation and review framework that complements engineering and economic assessment and it makes use of a range of predictive and analytical tools.

One of the distinctive characteristics of EA is its interdisciplinary nature where core activities include integrating information from different sources and reaching judgments where a high degree of uncertainty may be involved. Therefore, for EA to be effective it requires engineers, planners and other development practitioners to understand and integrate the information from a variety of disciplines beyond their original training or experience. The practitioners may also be required to apply techniques of public consultation and appraisal for which they have no background. These conditions make it important for EA practitioners to have specialized training in EA processes and project design as well as benefit from the lessons of practical experience.

When implemented effectively, EA is the main instrument by which a project's stakeholders e.g. local communities, developers, government agencies, environmental NGOs--can discuss and jointly design environmentally sustainable measures. Through EA, the affected groups have the opportunity to influence the design of a project in such a way that generates ownership of the project. Experience shows that community participation increases the effectiveness of any field activity. For example, locations of some buildings or equipment may be inappropriate because they conflict with sacred places, or local communities usually have their own perceptions of the best possible use of their local resources. Though this may not be the optimal choice from an economic, or even of an environmental viewpoint, it is through a dialogue between the stakeholders that a socially optimal choice is made.

The Concept of Capacity Building "Capacity building", for the purposes of this discussion paper, involves the creation, expansion and mobilization of human, organizational, institutional and financial resources to accomplish a given task. Capacity building for environmentally sustainable development is a long-term process that encompasses a wide range of specific activities designed to enhance the ability of individuals, organizations and societies to manage their environment.

Capacity building activities in EA cannot be considered in isolation from capacity building for environmental management as a whole. Nor can the strengthening of environmental management capacity be undertaken in a way that is not connected to the economy and society. For example, investment in environmental management capacity may be poorly spent if there is little community concern or action for environmental problems or a lack of political stability.

If societies are to achieve the capability to sustainably manage their environmental resources several conditions need to be met. The key conditions are:

- **economic development:** in less-developed countries it is only a growing economy that can provide the necessary means for covering basic needs, including those fundamental to environmental protection;
- **governance:** a body of effective policies and laws covering the management and protection of the environment that are respected by society and governments

- **information:** knowledge about the environment and the linkages between the environment and human activity through education, research, monitoring and other activities; and
- **participation:** participation by communities in development activities which affect their well being and the active and informed contribution by communities to the processes by which governments establish and implement their laws and policies.

There are important interactions between these conditions. Improvements in one can often improve the effectiveness of other conditions. Equally, a deterioration in one condition may erode the effectiveness of other conditions. Some of interactions between these conditions are illustrated in Figure 1.

This "systems" perspective on environmental management capacity building provides a framework within which EA capacity building should be viewed. However, effective EA also requires specific conditions to be met. These are:

- **institutions and organizations:** a clear framework of policy, legislation, regulations procedures and guidelines together with effective administering agencies;
- **clearly defined objectives:** the overall purpose and associated objectives of the EA system (encompassing law, regulations and procedures) should be stated explicitly;
- **human resources:** skilled administrators of EA processes and experienced practitioners in the public and private sector;
- **information and research:** base information about the natural environment (including critical ecosystems), a research infrastructure that can respond to specific needs, and mechanisms for monitoring the state of the environment; and
- **public involvement and support:** mechanisms for public participation and for the exchange of information between communities and EA practitioners.

These aspects of EA capacity are often mutually dependent and self-reinforcing. For instance, well written environmental assessment legislation will be ineffective unless people skilled in the use of EA are available. Unless communities are well informed and consulted in EA processes, proposals will not benefit from local knowledge. The conditions needed for EA capacity are shown in Figure 1 along with some of the linkages between these conditions.

Figure 1. A Systemic Approach to EA Capacity Building

Conditions Necessary for EA Capacity

This systemic perspective is important as a backdrop against which to discuss ways and means to expand EA capacity in SSA.

PART TWO: EA CAPACITY IN SUB-SAHARAN AFRICA

General Overview

The status of EA capacity in SSA varies considerably from country to country. South Africa is atypical with well developed processes and a relatively large community of EA professionals. In other countries, such as Kenya, Zimbabwe, Ghana and Nigeria, there is considerable experience with EA and a growing cadre of private consultants and consulting firms with expertise in EA and EA-related areas. Most countries, however, have very limited experience with EA, little or no EA-specific institutional capacity, and a low (although often growing) number of specialists with EA capabilities.

In 1990, the World Bank reviewed the capacity of countries in SSA to undertake environmental assessments. This revealed considerable limitations although several countries were drafting legislation and skills were being developed in the public and private sectors. During the past five years further progress has been made thanks to considerable efforts of some countries and the assistance provided by the World Bank, UNDP, UNEP, IUCN, USAID and many other agencies. However, half the countries in Sub-Saharan Africa have yet to finalize their own EA legislation. The vast majority of countries still have difficulty implementing EA procedures for lack of adequate human, technical and financial resources as well as relevant institutional arrangements.

In many African countries the capacity-related problem lies as much in under- or mix-utilization of available capacity as it does in its shortage. Governments through their universities and colleges, development assistance agencies, and NGOs have been engaged in imparting EA skills to nationals in many countries. However, the training has often been ad hoc and outside a strategic, long-term framework. Opportunities for trainees to receive follow-up training or obtain practical EA experience have been limited. For projects requiring EA, governments and donors have tended to look for international consultants based in developed countries instead of utilizing what exists in-country or in the region. The consequence of this is three-fold: training becomes an expensive exercise that does not yield anticipated results; the trained personnel soon lose the skills they have acquired; and the countries continue to rely on expatriates who are much more expensive than local experts.

This lack of domestic capacity has resulted in: (a) a compromise in the quality and comprehensiveness of EA conducted on projects in the region, (b) over-reliance on expatriate consultants for environmental assessment and insufficient transfer of international knowledge to countries of the region; and (c) avoidable damage to the environment.

Commitment to Build EA Capacity The need to enhance domestic EA capacity has been recognized at the highest political levels. First, the Agenda 21 of the 1992 UNCED conference gave high priority to this task. More concretely, African Environment Ministers have formally agreed on the importance of expanding the use of EA within the

region and to build capacity for this task. At the June 1995 High Level Meeting of African Environment Ministers in Durban, organized by UNEP, the Ministers and government representatives identified for immediate priority *"...promoting capacity building, based primarily on the use of African expertise and institutions.... "*. This meeting of African Environment Ministers (AMCEN) sets down an important agenda for EA capacity building. An extract of the Ministers' communiqué is provided in Box 1.

On the technical side, an EIA Framework for Africa was developed in 1994 by a group of African experts gathered by Earthcare Africa Monitoring Institute with Commonwealth and UNEP financing. This framework is summarized in Box 2.

Box 1:
Areas for Immediate Priority Action on Capacity Building
The 1995 African Ministerial Meeting on Environmental Impact Assessments

The Ministerial Meeting identified the following areas for immediate priority action:

- Using EIA as a continuous planning tool and the strengthening of institutional and legal frameworks to ensure enforcement, by fully integrating this tool, including biophysical and socioeconomic aspects, from formulation of policies, plans, programs and projects, to their implementation and evaluation.
- Sensitizing policy and decision makers in governments and the private sector to the importance of integrating EIA in development planning.
- Establishing: (i) an EIA database on experts and institutions in the region; (ii) a geographic information system (GIS) to facilitate activities on specific EIA problems; (iii) a mechanism to promote information exchange on a regular basis; (iv) an African Network of EIA Experts and interested parties to provide technical advice, information and training on EIA and to mobilize financial support for its activities, and (v) collaborative activities between African EIA Centers in African countries to facilitate EIA capacity building.
- Promoting cooperation, including the exchange of experiences amongst ourselves and ensuring the development and use of country-specific guidelines, while being aware of international efforts in this area.
- Promoting cooperation between developed and developing countries.
- Promoting capacity building, based primarily on the use of African expertise and institutions, urging our countries to:

  (i) develop curricula to incorporate EA education at all levels of education and training;

  (ii) encourage governmental and non-governmental organizations to participate in EIA capacity building;

  (iii) enhance public awareness and popular participation in the development and use of EIA, particularly involving NGOs, women, youth and community level organizations; and

  (iv) encourage all activities in the region to promote the development and use of EIA.

Source: Extracts from the communiqué cosigned by all ministerial delegations present at the Africa High-Level Ministerial Meeting on EIA in Africa, held in Durban, South Africa, June 1995.

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Box 2:
A proposed EIA Framework for Africa

The framework puts EIA in the context of sustainable development and the livelihood of Africans depending closely on the way resources are managed. Based on the observation of the limited development of national capacities in Africa, the framework proposes to promote environmentally sustainable livelihoods and development through the achievement of a series of objectives:

Long-term objectives:

a) Conservation and sustainable use of natural resources.
b) Protection and enhancement of the quality of all life forms.
c) Promotion of public awareness on environmental issues.
d) Strengthening and building capacities to carry out EIA.
e) Integration of environmental considerations in development planning processes.
f) Generation, storage and dissemination of environmental information.
g) Linking grassroots development strategies to global and international initiatives.

Short-term objectives (project specific):

a) Assess the nature, intensity and duration of impacts, positive and/or negative, of proposed development projects.
b) Assist in decision-making with regard to costs and benefits of proposed development projects.
c) Promote local-community and public participation in the EIA processes.
d) Promote social and cultural considerations in project design.

The framework recognizes a series of prerequisites to make EIA effective: political will, legal framework, funding resources, human resources development, popular participation, and institutional setup. Eventually, the framework recommends the close integration of EIA into project preparation (with emphasis on screening and scoping), project reporting and implementation.

The EIA framework for Africa concludes: "When people participate in their own development they are able to achieve sustainable livelihoods. Participation is possible in a democratic, accountable and transparent socio-economic and political system. To be sustainable, development projects must address economic, socio-political and environmental issues."

Current EA Capacity Building: The Main Actors

This section discusses the potential and actual roles of different actors (governments, universities, non-governmental organizations, the private sector, and the development assistance community) in relation to EA and EA capacity building in SSA. Time and resources have not permitted a comprehensive analysis of current activities by the various actors and the effectiveness of their activities. However, there is broad consensus that

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much can be done to enhance the effectiveness of ongoing activities and to expand efforts in certain areas.

Governments

Governments ideally perform the following key functions with regard to EA:

- Establishing and enforcing EA related legislation;
- performing specific tasks under such legislation, such as defining procedures, reviewing EA outputs and issuing licenses or permits for individual projects;
- supporting scientific research and education that contribute to building professional capacities and information databases of relevance to EA; and
- making information available--on environmental issues and on issues related to specific development proposals.

In some countries, some or all of these responsibilities have been decentralized to provincial or local levels. This has to be taken into account in the context of capacity building. However, most SSA countries have yet to enact EA related legislation and even fewer have specific procedures in place. In addition, institutional capacity to operate such procedures is generally weak. This means that, for most countries, EA is only carried out when it is required by external parties such as multilateral or bilateral development agencies. Consequently, many types of activities are never subject to EA and there is no stable demand for EA services--demand that could trigger the development of in-country consultancy services in the environmental area. The lack of an institutional and regulatory framework supporting EA is therefore currently one of the principal impediments to EA capacity building in many SSA countries, something which has to be fully addressed in a capacity building context. However, there are some encouraging signs of change: over half the countries in SSA are at different stages of developing EA legislation or policy.

Most countries in SSA are preparing or have completed National Conservation Strategies (NCSs) or National Environmental Action Plans (NEAPs). These exercises provide a strategic overview of national environmental issues and priorities. There is now a movement in some countries to take these exercises down to the next level of local environmental action plans (LEAPs) and local strategic approaches to the formulation of policies and the building of capacity. These strategic efforts to improve environmental management can be extremely useful in designing well-focused, needs-based approaches to EA capacity building.

Universities and Other Institutions of Higher Learning

Universities are valuable sources of capacity building in education and scientific knowledge. Their contribution to environmental management issues is substantial

although this is subject to financial and other constraints.[1] Universities are organized around specific disciplines. As requirements of environmental assessment (and environmental management generally) demand an inter-disciplinary approach, a significant number of universities have responded to the need for inter-disciplinary training in environmental management through the creation of specific course programs or centers. Some of them provide consultancy services. There are also institutions not associated with universities that have created similar programs. The role of universities and other research centers in building EA capacity is discussed further in Part 3.

The Private Sector

Just as a regulating and enforcing government is a key prerequisite for EA to function well in a country, professional expertise to carry out EA studies is also necessary. In most countries, this expertise is provided by the private sector, responding to demand created by EA requirements. As indicated above, universities and other research centers may also provide such services, or may act as "network nodes" for private sector professionals.

Currently, a number of private sector consultants with EA capabilities are scattered unevenly throughout SAA. However, the specialized needs of EA are still not adequately supported by such consultants, nor by other entities that could have provided such EA services. This is to large extent due to the fact that few countries require EA (see above), but the potential contribution of the domestic private sector is also inhibited to some extent by the fact that there is limited knowledge amongst donor agencies and international corporations of in-country capacity. There is still a strong tendency for governments and development assistant agencies to look outside SSA for EA expertise. Some development assistance agencies also have policies that require the employment of their own nationals, even in circumstances where local competence is available. Finally, in situations with competitive open bidding the tendency will be to attract the most experienced and competitive practitioners, often denying local consultants the opportunity to get involved and thereby gaining the experience and skills needed to compete internationally.

Non-governmental organizations (NGOs)

In many ways NGOs have spearheaded environmental protection efforts in Africa, but they have generally not been active in the EA area. However, in keeping with the rising recognition of the value of and demands for EA by donors, some NGOs have started to pay more attention to this instrument. Examples include:

- IUCN has provided EA training in several countries, including Angola, Mozambique, Cameroon and Tanzania. In addition, IUCN has offered a variety of other EA

[1] The Association of African Universities series of background papers for the 1995 Joint Colloquium on the University in Africa vividly illustrates the difficulties under which many universities operate on the continent.

services, including assistance with environmental assessment legislation. It is also helping develop more comprehensive programs of EA capacity building in Uganda.

- The EarthCare Africa Monitoring Institute has been involved in training of governmental officers and NGO front-liners in EA. With UNEP and some of its trainees and network members, this SSA-based NGO developed the Framework for EIA in Africa. It has a pool of partners with EA skills, who offer consultancy services.

- Kenya Energy and Environment has organized training workshops for government officers and front line workers. The Group for Environmental Monitoring in South Africa and the Nigerian Environmental Study/Action Team are examples of NGOs which are providing EA services.

NGOs could clearly play a stronger role in expanding EA capacity in SSA. Many can offer specific technical expertise of relevance to institutional and regulatory development and EA training. They can also assist in establishing and maintaining networks of practitioners, and enter into partnerships with other NGOs, development assistance agencies and governments in order to solve specific tasks. Locally and nationally based NGOs can contribute greatly to environmental awareness raising in-country and advocate introduction of EA in development planning, both on a case-by-case basis and as a matter of laws and regulations. Once EA systems are in place, they have a key role to play in public consultation processes.

Development assistance agencies

Multilateral and bilateral development assistance agencies can have important functions in EA capacity building, including:

- Advising governments on establishing or strengthening the institutional and regulatory framework for EA; and
- providing financial and technical assistance for capacity building efforts such as: EA training, establishment of permanent EA training programs within research and educational centers, building of environmental agencies or units within existing agencies, or creation and expansion of professional networks of EA specialists.

Many development assistance agencies already provide support for EA capacity building in SSA. In some cases this support involves specific EA training courses, in others it may involve longer term programs for strengthening environmental management capacity. Box 3 provides examples of EA capacity building supported by a number of agencies. A widely recognized problem is that the various activities supported by the agencies often lack coordination, even within the same countries. An immediate challenge is to overcome this

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problem and move towards coordinated, coherent approaches that take into full account the needs of each country.

Box 3:

Examples of EA Capacity Building Activities supported by Development Assistance Agencies

A number of multi- and bilateral development assistance agencies support EA training and other efforts to expand EA capacity in SSA. The following examples are illustrative:

The **World Bank** and the **African Development Bank** have supported EA training workshops in several SSA countries, usually focused on training the trainers. The courses have often been linked to specific projects financed by these institutions. The World Bank is also involved in several environmental institution strengthening projects that include EA capacity building as a component (e.g., in Benin, Gambia, Ghana, Madagascar and Nigeria). The World Bank's Economic Development Institute (EDI), which specializes in providing training courses for the Bank's borrowing member countries, is not currently running any EA training courses per se, but presents EA as one component out of several in courses on environmental economics and project appraisal.

The **United Nations Environment Programme** (UNEP) actively encourages EA capacity. It hosted the 1995 High Level Ministers Meeting in Durban, has organized a number of training workshops, the latest in Gabon during December 1995 and facilitates regional environmental monitoring capability through the Global Environmental Monitoring System (GEMS) and the Global Resource Database (GRID). UNEP also issued an EA Training Manual in 1996.

The **United Nations Development Programme** (UNDP) has a significant role in capacity building generally and has been responsible for organizing a series of two week EA training workshops in many SSA countries.

The **Canadian International Development Agency** (CIDA), through the Zimbabwe Natural Resources Management Programme, is supporting EA capacity development in Zimbabwe and provides similar support in Zambia. CIDA also supports the Environmental Capacity Enhancement Project for Southern Africa being implemented by the University of Cape Town and University of Guelph (Ontario).

The **Swiss Development Assistance Programme** has been active in the field of EA capacity building for several years, including an ongoing programme in Burkina Faso.

USAID is currently implementing an EA Training Programme in Africa aimed at its own [illegible] and project counterparts. Through its "Initiative for Southern Africa" USAID is supporting the development of EA capacity in several countries within the Southern African Development Community (SADC). USAID also supports NEPDA and [illegible] a project (AfricaLink) that will facilitate electronic mail communication and [illegible] dissemination of networks in Part Three.

problem and move towards coordinated, coherent approaches that take into full account the needs of each country.

Box 3:
Examples of EA Capacity Building Activities supported by Development Assistance Agencies

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PART THREE: MECHANISMS FOR CAPACITY BUILDING IN SSA: THE REGIONAL AND SUB-REGIONAL LEVEL

This part of the paper discusses three mechanisms that may be used to facilitate EA capacity building, taking a region-wide and sub-regional perspective; Part Four takes a country-by-country focus. The mechanisms are: sub-regional centers for EA capacity building; networks of professionals with EA capabilities and interests; and, strategic partnerships among organizations active in EA capacity building. In practice, a strategic approach to EA capacity building in SSA requires tiered thinking whereby actions at the regional or subregional level complement actions at the country level.

Sub-Regional Centers for EA Capacity Building

This section discusses the current and potential role of higher educational and research institutions as resource centers for EA capacity building. It does not attempt to evaluate existing centers but it does raise issues that require consideration if such centers are to be important contributors to EA capacity building.

In the past 20 years a significant number of universities, particularly in Anglophone Africa, have established centers for environmental studies, such as the following:

- University Institute of Ecology, Obafemi Awolowo University, Ile-Ife, Nigeria
- School of Environmental Studies, Moi University, Nairobi, Kenya;
- Institute of Resource Assessment, University of Dar es Salaam; Tanzania;
- Institute of Environmental and Natural Resources, Makerere University, Uganda (see Box 4); and
- The Environmental Evaluation Unit at the University of Cape Town (Box 5).

In addition to these centers there a number of other universities that offer interdisciplinary courses with a focus on the environment. These include:

- Department of Environmental Science at the University of Botswana;
- University of Cape Coast in Ghana;
- University of Science and Technology at Kumasi in Ghana;
- Faculty of Science at Kenyatta University, Kenya;
- Centre for Applied Social Science at the University of Zimbabwe;
- Department of Geography at University of Zambia, Lusaka;
- Pietermaritzburg School of Environment and Development and the Durban School of Environmental Management of the University of Natal, South Africa;

- University of Potchefstoom, South Africa, which has recently started to run short term courses in integrated environmental management for high and middle level managers; and University of Cape Town, South Africa, which offers a range of "environmental" courses and houses the Environmental Evaluation Unit.

Though the inventory is more limited in Francophone Africa, there are some centers of importance, such as:

- Institute of Environmental Studies, Cheikh Anta Diop University, Dakar, Senegal;
- Ecole Inter-Etats de l'Equipement Rural (EIER) in Ouagadougou, Burkina Faso; and
- Centre for Environment and Development, University of Dschang, Cameroon (see Box 6).

The nature of environmental assessment requires practitioners to be familiar with the contributions of the natural, physical and social sciences, to be proficient in the tools and methodologies used in EA and to understand the needs and cultures of the communities with whom they work. These requirements are arguments for a background that includes research, the acquisition of technical skills, and practical, on-the-job experience.

Box 4:
Makerere University, Uganda: Environmental Research and Training

Makerere University Institute of Environment and Natural Resources (MUIENR) in Uganda, established in 1987, promotes research and training in environmental and natural resource management. MUIENR maintains a close relationship with the Government of Uganda and the Ministry of Natural Resources, and also has good linkages with donor agencies and with other local and foreign educational institutions. MUIENR provides:

(a) training for undergraduate and graduate degrees;
(b) short term courses in EA and other related subjects;
(c) consultancy service;
(d) an environmental forum for government officials, NGOs, researchers and community representatives; and
(e) workshops.

- University of Potchefstoom, South Africa, which has recently started to run short term courses in integrated environmental management for high and middle level managers; and University of Cape Town, South Africa, which offers a range of "environmental" courses and houses the Environmental Evaluation Unit.

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Box 5:
An example of a Center Providing Environmental Services: University of Cape Town

The Environmental Evaluation Unit (EEU) at the University of Cape Town (UCT) is a self supporting unit providing environmental services internationally. The EEU:

(a) provides consulting services;
(b) undertakes environmental research; and
(c) offers mid-career training in integrated environmental management.

The fields of expertise covered by the EEU include:

(a) capacity building for environmental resource managers;
(b) environmental auditing;
(c) environmental impact assessment;
(d) environmental policy development; and
(e) facilitation and conflict management.

The consulting services of the EEU are backed by the staff, equipment and resources of UCT. The EEU supports the government and the private sector. It is also involved in capacity building programs in other parts of Southern Africa. The EEU has developed a partnership with the University of Guelph, in Canada, to undertake some of its capacity building activities.

Institutions that are involved in preparing people to work in the field of EA therefore should meet certain criteria, including:

- An interdisciplinary approach to teaching and research, specifically the ability to draw upon the staff and resources of other university departments;
- an institutional structure that gives the center a high degree of operational independence;
- the capacity to offer different courses and programs which could range from short term courses for mid career people in the private and government sector to Masters or even Ph.D. programs;
- close linkages to the public policy needs of the government and the market demands of the private sector,
- linkages to other learning/training institutions within the region or even outside of the continent;
- linkages to development assistance agencies, especially during establishment years;
- access to international networks of professionals and organizations involved in EA and related areas, through Internet and other media;
- the capacity to offer consulting services and provide practical experience for students; and
- resources sufficient to maintain solid standards of training and services.

Within SSA it may be difficult for many institutions to meet the full range of criteria. The problems facing many African universities (e.g., limited resources, low salaries and loss of staff, low morale, politicization and political instability) are well known. These problems may suggest that centers--as a rough rule--should have a relatively independent role in relation to university structures. It may also emphasizes the importance of developing sources of revenues independent of direct government support (e.g., by developing consultancy services), and developing strong network connections and cooperation arrangements with other institutions with similar or complementary capacities.

Box 6:
Center for Environment and Development Studies in Cameroon

The Center for Environment and Development Studies in Cameroon (CEDC) at the University of Dschang is a joint cooperation between the ex-Ministry of Higher Education, Computer Science and Scientific Research in Cameroon and the University of Leiden in the Netherlands. The Center is jointly funded by the Cameroon and Dutch Governments. The main activities of CEDC are training, higher education and scientific research. Its intensive training programs include methodologies and procedures for environmental assessment. Training is provided for students in other University departments and for the staff of the ex-Ministry and other agencies. It serves as a research Center for Cameroonian and Dutch post-graduate students and it also houses a Documentation Center and consulting services. The partnership between CEDC and the University of Leiden appears to have substantial benefits for both parties.

There can be no doubt that centers specializing in EA related training and service delivery must be part of an EA capacity building strategy for SSA. Only such institutions can provide the continuity needed for a gradual building of professional capacity both in the public and private sector, and build up databases and "memories" of experience that are rooted in the region itself. They can also serve as the "nodes" for the building and maintenance of professional networks.

A key step towards building EA capacity in SSA might therefore be to identify a handful of committed and capable institutions that can serve as centers for EA capacity building within different subregions (defined along linguistic and broad eco-regional boundaries).[2]

[2] While specialized centers have the potential to be an effective capacity building mechanism, there are also good reasons to integrate EA training into the curricula of other professional courses such as those for engineers, architects and land use planners. It is these professionals that will play a major role in the planning, design and construction of development activities.

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Networks

Networks are groups of individuals or organizations sharing some common interest and communicating with each other about this interest. The principal contribution of networks to capacity building is that they facilitate information flows in a cost-effective way. The benefits of this include:

- professional development;
- improved access to work assignments by "being in the loop";
- moral support for individuals (especially for people isolated from other professionals);
- sharing of resources;
- the ability to learn from the successes and failures of others;
- quality assurance, through peer review and access to information; and
- continuity; if one element in the network collapses, activities may be continued by others.

Networks may be formal or informal. They may have a role simply in the facilitation of information flows or a more substantial function involving specific activities and outputs. In the experience of IUCN (which is, itself, a network of over 800 members), networks are most effective when they have the following characteristics:

- common purpose and interest providing the underlying incentive to network;
- mechanisms for day-to-day contact (e.g.; telephone, Internet, fax, mail) and more substantial communications of common interest issues such as newsletters; a core of enthusiastic people to energize the network and keep it operating;
- a small secretariat;
- opportunities to meet occasionally and directly share experiences;
- a work program for the network including training and capacity building;
- a source of funds to finance establishment and operation of the network; and
- at the beginning, a catalyst for network initiation.

One of the characteristics of networks is that they can be very organic and can expand and contract according to need and other factors. This dynamic nature of networks is one of their positive qualities, but networks may also be vulnerable, especially in their formative stages and, almost certainly, will require external sources of support for their survival. Professional networks in developed countries are funded by the (usually well paid) members of the profession, membership is often necessary, and fees are usually tax deductible. In developing countries the situation is usually very different.

Effective application of electronic mail technologies (and the Internet more broadly) can fundamentally improve communication within networks. A significant number of African countries already have Internet access. Individual access to the Internet is likely to increase dramatically and the reliability of electronic mail connectivity will be improved through USAID's AfricaLink initiative and through other efforts. Use of electronic mail technologies opens up a range of possibilities. Environmental Studies Centers could, for instance, use it for distance learning and software is being developed to provide simultaneous translation of electronic conferences. This technology would facilitate the exchange of communication between the anglophone, lusophone and francophone regions of Africa.

Many networks already exist in Africa (see examples in Box 7), and some of these, like the Network for Environment and Sustainable Development in Africa (NESDA), are pan-African in nature. Other networks are international, sub-regional or local; the International Association for Impact Assessment (IAIA) is an international network involving EA practitioners in many countries, including in Africa. There is substantial opportunity to build on existing networks as well as to create others designed to meet specific needs. For example, through the formation of a core group of strategy experts within a network, short term technical assistance and training can be made available to country specific strategy teams for EA capacity building.

The communiqué from the June 1995 African High-level Ministerial Meeting on Environmental Impact Assessment identified the establishment of an African Network of EIA experts as an immediate priority. It suggested this be built on existing networks and called upon the donor community to formally consider an appropriate approach to effect this step.

Box 7:
Examples of Environment-Related Networks Active in SSA

The Intergovernmental Research Center Providing a Network for Capacity Development: ICIPE. This Nairobi-based International Centre for Insect Physiology and Ecology was established in 1980 to serve the African continent. The center devotes its activities to crossing geographical and institutional borders playing a co-operative role in research. ICIPE's inter-governmental status and networking experience have enabled the organization to serve as a focal point not only for arthropod research and but for capacity development in Africa too. It has received international recognition for integrated pest management and biological control strategies for insect disease vectors and plant pests. Currently, ICIPE manages graduate training in partnership with 30 African Universities and plans to expand this highly successful program to include more universities in support of its agenda of capacity building in biodiversity research in Africa.

African Environmental Research and Consulting Group (AERC). The African Environmental Research and Consulting Group is a private sector network with a primary mission of "assisting in fostering sound environmental protection and human health in Africa". It is "a consortium of native African environmental scientist/engineering experts and specialists in African development based primarily in the USA... (Their) establishment is committed to addressing high priority environmental problems across multi-media boundaries (such as water pollution, groundwater contamination, and technological applications) to abate damage and protect human health....".

Afri-Mac. A retired business management consultant in Zambia has established a network of Eastern and Southern African experts in Environmental Assessments. The network works as a private general consulting services company (Afri-Mac consultants) maintaining a data base of environmental consultants which expands over Zambia, Zimbabwe, Cameroon, Tanzania, South Africa, and Kenya.

Network for Environmentally Sustainable Development in Africa (NESDA). NESDA, an African initiative based in Abidjan, Ivory Coast, provides a resource and a forum for African experts in the management of the environment. Although it was originally funded and directed by a donor agency, it has recently become an independent national NGO undertaking:

- analysis of national policies
- organization of thematic and regional workshops capacity building
- technical missions and
- a consultancy register

NESDA is likely to play an increasing role as a facilitator, as a catalyst for capacity building initiatives and as a center of a system of networks.

Partnerships

Partnerships are needed at all levels to advance EA capacity in SSA. No single organization has the resources and capabilities needed to achieve results singlehandedly. Creative partnerships are needed between governments and donor agencies, NGOs and the private sector, donor agencies and centers of learning, networks and the private sector, etc. There are good reasons to look for opportunities to create and enhance partnerships, as they:

- **Create synergies.** Partnerships can allow activities to proceed that would not happen if only one organization was involved. More can often be achieved, for instance by donor collaboration in capacity building initiatives.

- **Gain efficiencies.** Partnerships facilitate information and help avoid duplication of activities. More efficient use can be made of scarce resources. Agencies, communities and NGOs may have comparative advantage in fulfilling different aspects of capacity building activities. Partnerships that take advantage of these comparative advantages in activity design and implementation will also make better use of available resources.

- **Achieve greater effectiveness.** Partnerships help pool the resources and knowledge that each partner can provide. Making use of the skills, knowledge and resources of all key stakeholders, through a working, participatory partnership, is likely to make project design more robust, to obtain ownership of process and results and to make the achievement of project goals more likely.

Partnerships are not an automatic recipe for success. There are often major differences in the resources available to potential partners and differences also in their influence, roles, agendas, cultures and procedures. Certain characteristics are usually associated with effective partnerships; these include:

- commitment;
- clear goals and expectations;
- mutual respect;
- openness in the sharing of information;
- sensitivity to matters such as gender and culture;
- including organizational culture;
- sharing of responsibilities; and
- agreement on the ground rules for the operation of the partnership.

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While partnerships can be informal, there is less room for misplaced expectations and other misunderstandings if the ground rules for the partnership are clear to all. Sometimes it may be appropriate to reach agreement through discussion and seal a partnership by shaking hands. In most cases more formality is desirable through mechanisms such as: contracts, exchanges of letters or memoranda of understanding, etc. Box 8 discusses a useful partnership in the area of EA between IUCN and UNEP. This discussion paper is a concrete output of a partnership between IUCN and the World Bank.

Box 8:
Partnership between IUCN and UNEP

IUCN and UNEP recognized independently the need for generic EA training materials and included them in their work programs. In 1994, together with the World Bank, they discussed the concept with a range of potential partners at the June 1994 "EA Summit". The idea matured into a project coordinated by UNEP with technical and financial assistance from the Australian Environmental Protection Agency. IUCN, UNEP, UNDP, the World Bank, CIDA and a number of EA experts from developing countries contributed with their experience to design the training materials. The product from this partnership--a training manual--should become a major tool for EA capacity building as it will serve as a resource to help different groups design courses that meet their specific needs. The manual is now available from UNEP.

The early stages of planning for EA capacity building should explicitly consider the opportunities for building formal and informal partnerships. As funding institutions, development assistance agencies have a particular responsibility in this regard. Partnerships can lead to improved coordination in planning and execution of activities, more effective utilization of resources through matching of compatible strengths, and less burdensome demands on the existing absorptive capacity in the recipient countries through reduced transaction costs.

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PART FOUR: STRATEGIC APPROACHES TO EA CAPACITY BUILDING AT THE COUNTRY LEVEL

Almost all countries in SSA have some experience with EA and most have different levels of EA capacity. The argument in this paper for a strategic approach to EA capacity building is not an argument to begin all over again or to stop activities in progress. But it does encourage those involved to explicitly consider the different interconnected components of EA capacity and to adopt approaches that help ensure sustainability in the capacity building process. This could require a new strategy for countries that have done no work in this area or minor changes to the existing approach for countries already embarked on the adoption of an EA system. One of the advantages of a strategic approach is that it identifies the different components of the process to help facilitate a multi-donor approach to assistance.

The argument for a strategic approach to EA capacity building does not imply that substantial resources are always required. In some countries, current capacity may be so weakly developed that local initiative could be overwhelmed by large scale capacity building activities. A strategic approach would explicitly recognize country realities and the long term nature of capacity building. It would build on and with what currently exists at a pace that can be accommodated by local conditions.

Key Considerations at the Country Level

The design of an EA capacity building program or strategy for a given country has to be responsive to the prevailing environmental, economic, social and political conditions. These conditions, along with expressed commitment and interest of governments, will to large extent dictate (i) the relative need for EA capacity building in one country compared to others; (ii) what can reasonably be achieved in any given country, and (iii) the focus of any capacity building efforts. A good understanding of these factors can therefore help in setting clear priorities for action within and between countries (based on what is needed and what is feasible given the conditions) and in designing targeted and cost-effective programs. This section discusses how some key country conditions may factor into the design of strategic EA capacity building programs for individual countries.

Political Stability

Unfortunately, little can be done in terms of improving EA capacity or any other aspect of environmental management in times of conflict or upheaval. In the short term, therefore, any plans for EA capacity building in countries such as Angola, Liberia, Rwanda, Burundi and the Sudan have to be postponed until the internal political conditions permit meaningful action in this and several other areas. However, even during difficult times preparation for future action can be undertaken, especially by development assistance agencies and international NGOs, by trying to expand the knowledge of the key environmental challenges facing such countries and identifying

possible approaches to addressing them for the medium and long term. It is particularly important to address any such challenges that might be related as a cause or effect to the political instability. EA may or may not have a function in such scenarios. For example, if conflict over valuable resources such as oil or other minerals is a central part of a military conflict, EA should become an important part of a peace-time resource management system.

If the political climate is relatively stable, good opportunities may exist for expanding EA capacity. Democratic government is particularly conducive to EA processes, which are open and consultative by definition. EA may also be one of several instruments used to introduce democratic and participatory processes at the local level though this has to be handled with considerable care.

Size, Strength and Structure of Economy

EA is typically undertaken for discrete investment projects with significant environmental and social impact. In the absence of such projects, there is little demand for EA services. There is therefore an obvious and close relationship between the size, strength and structure of a country's economy on the one hand, and the need for EA processes on the other. The larger or more dynamic the economy, and the more it is geared towards activities involving construction of some kind, extraction of natural resources, or conversion of natural habitats for economic activity, the more it will need EA (from an environmental management perspective). While this observation may seem almost too obvious to deserve mention, it is important to factor it into any strategic approach to EA capacity building.

In a situation of scarce financial resources both in the development assistance community and among African countries, this suggests that--other factors such as political stability and institutional capacity being relatively equal--*resources for EA capacity building should be targeted, as a first priority, towards those countries that are most in need of EA services due to a large and/or growing economy, in relative terms.* This is not to say that countries with small economies and no or negative economic growth do not experience environmental degradation or do not need assistance to reverse such degradation. It is simply that the particular mechanism of environmental assessment may be more in immediate need or demand in economically more dynamic countries[3]. On the other hand, countries expressing strong interest and commitment to building EA capacity should receive assistance to do so, irrespective of the size or performance of the economy.

[3] An important caveat is in order at this point: Strategic assessments of the causes of environmental degradation and identification of measures to slow and reverse such degradation may be extremely useful and urgent priorities in many countries irrespective of the size, growth or structure of the economy.

Existence of an Institutional and Regulatory Framework for EA

This is a key determining factor for designing an EA capacity building strategy for a given country. First, if a system is in place and working well, the country is unlikely to need any external support for additional capacity building. As has been discussed earlier. the mere existence of requirements that are upheld and enforced by the government creates a market demand for EA services, which often leads to establishment or expansion of a private sector environmental consulting industry. Few, if any, SSA countries are at this stage, however. Most have no EA legislation in place and weak environmental institutions. Some countries have enacted legislation or have issued a policy on EA, but have not yet instituted a process that automatically is applied to investment projects. A few countries have established both legislation and routines for EA and are in the process of implementing them. The main challenges for these countries are often financial constraints and limited institutional capacity for follow-through and enforcement in their environmental agencies.

Needless to say, the existing institutional and regulatory framework relative to EA has to be fully understood before attempting to launch a program to expand capacity. The need for doing anything at all, the definition of measures to be taken, and their urgency, will largely be determined by this factor (although in combination with considerations of political stability and size, strength and structure of the economy).

Designing a Course of Action

Building on the above analysis, one might design targeted response strategies for each country in SSA based on the conditions prevailing in the countries. However, results from this kind of analysis have to be tempered by one very important factor: expressed interest and commitment by governments.

On the one hand, countries with: (i) unstable political conditions; (ii) a weak economy; and (iii) a lack of a regulatory and institutional framework for EA, would not be prime candidates for immediate assistance to establish such an EA framework or invest in broad-based EA training. At the other extreme would be countries with: (i) stable political conditions; (ii) a relatively large and dynamic economy; and (iii) an EA framework in place. Such countries would perhaps not need too much assistance to strengthen EA regulations, but there might be considerable demand for EA training to strengthen institutions involved in EA and in-country professional expertise in the private sector.

In between these extremes are a number of possible combinations warranting different response strategies. For example, politically stable countries that are currently without any EA laws or regulations but have positive economic growth might be prime candidates for a concerted effort to establish an EA system appropriate to the needs of the country. If the economy depends to a large extent on one or two key sectors that are environmentally sensitive, any EA training should perhaps be tailored to those sectors

and include training at the strategic level (i.e., assessment of policies relative to these sectors). Economically low-performing countries without an EA system might be in need of a process of gradually introducing EA requirements for certain types of investments, but it might be inappropriate to overburden limited institutional and financial capacity with any massive efforts. In countries with political instability but with large activity in environmentally sensitive sectors, a medium-to-long term plan of capacity building coupled with targeted assistance in the key sectors (e.g., one to two week training programs) might be feasible.

Governments might design their own strategic approaches to EA capacity building based on considerations such as the ones above. They might also want to undertake an EA training needs assessment to further refine their strategy. Governments could also start with priorities identified in a NEAP or similar exercise, move on to a review of the existing situation in terms of the country's capacity (including the conditions discussed above), and then towards a strategy that clarifies the objectives to be pursued, the means by which to pursue them, and the resources required to do it. The process would need to be participatory, involving those whose cooperation is required for implementation of the strategy. This exercise could be done for EA capacity alone or incorporated into a larger strategic approach to the strengthening of environmental management capability generally.

A strategic approach to the development of EA capacity would recognize that this planning instrument has applicability over a wide range of activities affecting the environment; not just medium and large scale projects typically financed by institutions such as the World Bank. There may be opportunities to integrate EA with other resource use planning methods or to apply it at the policy and programme levels of planning.

The identification and assessment of EA training needs is an important part of any EA capacity building process. This should be an integrated part of any overall strategy although separate exercises will also have value in targeting priorities and making good use of scarce resources. Box 9 discusses an example of an EA training needs assessment, done in Tanzania.

Box 9:
EA Training Needs Assessment: Tanzania

In 1995, the University of Dar es Salaam and the International Institute for Environment and Development undertook the first phase of a comprehensive EA training needs assessment for Tanzania. This exercise:

- reviewed the relevant legislation and institutional mandates;
- reviewed available environmental impact statements;
- assessed available expertise in disciplines relevant to EA (survey with 345 respondents with natural resources management expertise, out of which 44 had expertise specifically relevant to EA);
- reviewed training materials and courses available in Tanzania;
- identified priority targets for EA training (including senior decision makers, EA review agencies, trainers, team leaders and NGOs); and
- defined the training resources required to meet priority training needs (EA Awareness training/introductory courses, review specialist and EA training course).

Further stages of this strategic exercise will involve preparation of training materials and the delivery of courses.

PART FIVE: THE ROAD AHEAD: BROAD RECOMMENDATIONS

"At the heart of this [....] effort is the recognition that capacity building is a long-term process and that the success of this process depends on the behavior of both our countries and the donor organizations. Each must play its part--and play it well. African countries must remain fully committed to the objectives of capacity building and must take the lead in every stage and every aspect of it. We will take the design of capacity building strategies, programs, and projects into our hands--quickly and efficiently learning through technical assistance what needs to be learned. Donor organizations need, in turn, to let go of their grip on the design and implementation of capacity building strategies, programs and projects. They need to recognize that in building capacity, the process is very much the product, and short-cuts are often in fact long.

[....]

If the challenge of capacity building in Africa is to be effectively met, it will require the creation of a framework that [....] would consist of four elements: a country-level framework that responds to the imperative of a national focus in capacity building; a framework for partnership with the World Bank [and other donor agencies--our addition] that provides for support of capacity building operations on the ground; an international framework that provides a forum for the donor community and Africans to share experiences and coordinate their capacity building activities; and a Trust Fund that facilitates all of the above. "

(The African Governors of the World Bank, September 28, 1996, in *Partnership for Capacity Building in Africa: Strategy and Program of Action, p.* 81. Report to Mr. James D. Wolfensohn, President of the World Bank Group.)

This paper has considered some of the complex dimensions of building EA capacity and the potential contributions of different actors and mechanisms. None of the outlined approaches provide a "magic bullet", but experience suggests that all have promise when viewed as part of a strategic whole. Since resources are scarce, success will depend on the ability of several actors to work toward a common goal and on the design of a strategy--or a set of strategies--based on careful setting of priorities according to realistic criteria of feasibility and cost-effectiveness.

This paper recommends that interested SSA governments, donor agencies, and NGOs with an interest in EA, move to agree on set of principles and a broad action plan for EA capacity building for SSA as a whole. IUCN East Africa will host a meeting in Nairobi in the fall of 1997 with the objective of reaching such an agreement. A proposed set of principles and action plan will be developed in preparation of this meeting through an intense consultative process based on wide review of this discussion paper. IUCN is now in the process of launching this consultative process, which will run for approximately six to nine months.

As a starting point, the following principles may be considered:

- EA capacity building requires strong commitment by the governments that want to participate. Participation in the initiative will require that governments present an assessment of their country's needs in this area (based, for example, on a National Environmental Action Plan, as well as considerations such as those discussed in Part Four) and ask for specific assistance in meeting these needs (e.g., by presenting an action plan for strengthening EA capacity).
- A small core of high-quality centers for EA training is needed to sustain efforts. The centers should: (i) already have some degree of capability in the area of EA (thus requiring assistance to expand such capabilities rather than creating something new "from scratch"); and (ii) be distributed strategically across SSA, taking into account language requirements and needs within subregions. Some subregions may have more than one EA center, and cooperative programs between them should be a major objective. Existing institutions that have ambitions to become one of the selected EA centers should be challenged to develop a detailed proposal.
- A region-wide network of EA professionals (trainers, consultants, government officers responsible for environmental review and permitting, etc.) should be established, building strategically on existing networks (e.g., NESDA, IAIA). The network's principal means of communication should be electronic mail/Internet. Subnetworks within the overall network should be encouraged.
- Donor agencies and international NGOs should develop a *coordinated* and *transparent* approach to EA capacity building at both the country and the regional/sub-regional levels, entering into partnerships amongst themselves and with countries where feasible. Some make take primary responsibility for supporting EA centers and networks, others may focus on supporting a specific group of countries (or a single country) in capacity building efforts. Responsibilities may also be divided thematically: some may support development of an EA regulatory framework, others may focus on EA training.
- Donor organizations should commit themselves to the principle of using SSA-based EA practitioners whenever possible in projects they help finance.
- EA training programs should primarily be targeted to meeting the specific needs and requirements of a country. Helping a country meet the EA requirements of the development assistance agency supporting the training program should not be an overriding objective, but an added benefit.
- For all of the above, donor organizations should commit funds for the long term.

The immediate challenge is to agree on a common set of principles. These may differ significantly from the ones proposed here. The next challenge is to design and reach consensus on a concrete action plan to implement the principles.

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ANNEX 1

THE IAIA'97 PRE-CONFERENCE WORKSHOP
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